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AMERICAN FARM WOMEN:
FINDINGS FROM A NATIONAL SURVEY

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ABOUT NORC

The National Opinion Research Center is a not-for-profit corporation affiliated with the University of Chicago. The oldest national survey research facility established to do social research in the public interest, NORC has conducted over a thousand studies since its founding in 1941.

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SUMMARY OF MAJOR FINDINGS

In the fall of 1979, the National Opinion Research Center at the University of Chicago entered into a Cooperative Research Agreement with the U.S. Department of Agriculture to conduct of a nationwide survey of farm women. The study had four major objectives:

- The collection of basic information from a representative sample of farm women, such as their involvement in the work and management of their operations, memberships in farm and community organizations, and participation in the off-farm labor force
- The measurement of farm women's experiences with the program activities of the U.S. Department of Agriculture, and their perceptions of those experiences
- The analysis of collected data with the aim of identifying those factors having the greatest influence on women's involvement in their enterprises and in USDA programs
- The comparison of farm women's responses with those from a sample of male farm operators

Of special interest was the question of whether farm women believe that they are treated unfairly or unequally by the personnel or policies of USDA.

In the summer of 1980, telephone interviews were conducted with a sample of 2,509 farm women and 569 men (mostly husbands of female respondents). Interviews lasted an average of one-half hour (twenty minutes for men), and were completed with random samples of respondents from all 48 continental states. Interviews were completed with 83 percent of the eligible women and with 74 percent of the eligible men; 13 percent of the women and 15 percent of the men refused to participate in the survey.

For this survey, a "farm woman" was defined as the farm or ranch operator, if a woman, or the wife of the operator, even if widowed, divorced, or separated. To be eligible for the survey, respondents (or their spouses) had to be operating farms, ranches, or other agricultural businesses in 1980.

For the sake of brevity, we use the term "farm" in the most general sense when referring to respondents or their operations. We note, however, that about 12 percent of our respondents referred to their operations as ranches, and another 5 percent percent chose a wide variety of terms (orchard, kennel, stable, nursery, etc.) to describe their enterprises.

Farm Women's Work, Organizational Memberships, and Attitudes

The survey probed several dimensions of farm women's involvement in their own operations and in agriculture generally, including their participation in the work and decision-making for their enterprises, their memberships in agricultural organizations, and a variety of personal attitudes and beliefs about their roles.

Many of the women in our sample reported long histories of living or working in an agricultural setting: 59 percent said they had grown up on a farm or ranch, and, on average, they reported spending 63 percent of their lives living or working in such settings. Nearly all women (96 percent) were married at the time of the survey. About one-third (31 percent) were currently working at off-farm jobs.

Using a list of 12 common farm tasks (including bookkeeping, animal care, various types of field work, marketing products and supervising labor) women were asked about their contributions to the workload on their operations. (Men in the sample were asked about the involvement of their wives in farm work.) On average, women reported involvement in just over half of the different types of tasks relevant to their operations. About one women in five reported participating in 80 percent or more of the tasks done on her operation. The great majority of women were involved in such tasks as bookkeeping, running farm errands and producing food for family consumption. On operations producing livestock or animal products, about two-thirds of the women contributed to animal care. Between one-third and one-half reported involvement in such tasks as field work and harvesting, making major farm purchases, supervising farm laborers or other family members and marketing activities.

Our analysis of women's participation in major farm decisions showed that very few farm women make final decisions entirely on their own. On the other hand, about half of the women indicated that they shared final decisions with their husbands about such matters as purchasing or selling land or acquiring farm equipment. In addition, about one-third of the women were involved in final decisions about renting land, the timing of the product sales, producing something new or trying new production practices. About 90 percent of the women were satisfied with their level of responsibility for decision making on their operations.

In general, the responses given by men and women agreed very closely. Contrary to the findings of others, we found no evidence that husbands undervalue the contributions of their wives to farm work or decision making.

About half of the women respondents belonged to one or more types of agricultural organization. General farm organizations such as the Grange and Farm Bureau were most commonly cited; very few reported membership in women's auxiliaries (7 percent) or farm women's organizations (2 percent).

Substantial proportions of women (55 percent) considered themselves to be one of the main operators for their enterprises. Among those who were married, three women in five felt that they could continued to run their operations alone if something should happen to their husbands. Yet very few women listed themselves as having agricultural occupations on their income tax forms. While about one-third listed off-farm occupations, most identified themselves as housewives.

Involvement with USDA Program and Agencies

Among the most important objectives of the survey was the collection and analysis of data on farm women's involvement with USDA programs and the agencies that administer them. Four programs (or groups of programs) from four different USDA agencies were selected for study: the Price Support (Commodity Loan) Program operated by the Agricultural Stablization and Conservation Service (ASCS); the Conservation Operations Program coordinated by the Soil Conservation Service but actually implemented by the Soil Conservation Districts within the states; a variety of Loan Programs (for farm ownership, operation, disaster recovery, etc.) administered by the Farmers' Home Administration (FmHA); and a number of education programs and advisory services operated by the Extension Service, usually at the county level. These programs were chosen primarily because they involved the largest numbers of farm operations across the country and therefore had the greatest chance of being familiar to and perhaps used by survey respondents.

We found that farm women were substantially less involved than men with USDA programs and agencies. This finding persists across a wide variety of involvement measures, including program awareness and familiarity, direct participation in the program application process, business contacts with agency personnel, attendance at Extension courses, and membership on committees or other groups concerned with agricultural policy. At the same time, our analysis of women's perceptions of their experiences with program applications (including their reasons for not applying), their contacts with agency personnel, and their access to Extension programs and services revealed no evidence that farm women belive that they receive unfair or discriminatory treatment in their dealings with USDA.

Further analysis demonstrated that for both men and women, involvement with USDA programs and agencies was influenced by a wide range of personal background characteristics, farm traits, and by the extent of an individual's involvement in their own operations and in agriculture generally. Among women, the single strongest factor in influencing overall program involvement was her husband's participation in program applications.

Our findings suggested that male-female differences in program and agency involvement levels are due primarily to differences in their enterprise involvement levels. Using statistical models, we demonstrated that when women and men are equalized on farm involvement factors, their differences in program and agency involvement levels nearly disappeared.

Farm Women's Policy Preferences

Beyond involvement with programs and agencies, we also investigated survey respondents' relationships to USDA in a more general way. At the close of each interview, all respondents were asked for their views on "the most important thing the U.S. Department of Agriculture could do to help farm and ranch people." Women were also asked a follow-up question on help specifically for "farm and ranch women."

Responses to the first question were expectably diverse, but the patterns of concerns exhibited by men and women were quite similar. A plurality of respondents (over one-third) focused on economic issues, with most calling upon USDA to assist producers in obtaining higher prices for their products. Also mentioned by sizeable percentages was the need to reduce government regulation and interference in the agricultural economy, the desire that USDA should take steps to improve communications with producers and increase support of their interests, and the need for increased attention to the plight of smaller family farms. Only 7 percent of men and 18 percent of women did not respond to this question.

Among women who answered the follow-up question on women's issues, three major topics predominated: help from USDA in changing existing inheritance procedures and estate tax laws; improved education and information programs for farm women; and greater recognition for the roles and economic contributions of farm women. Corroborating our findings with respect to program involvement, very few (4 percent) of the responses to this question indicated any concern about discrimination by USDA against farm women.

Somewhat surprisingly, we found that nearly 60 percent of the women did not offer a response to this question which focused on the preferences and needs of farm women as a group. Over one-third offered no response; most of the remainder either repeated their response to the previous question, or suggested that USDA help their husbands or their operations in order to help them. We believe that these responses reflect an important aspect of the way many farm women conceptualize their identities and roles. Most women appear to identify primarily with their status as producers or members of agricultural enterprises, and only secondarily with their status as women in this field. They are mainly concerned about the problems facing their operations or their industry as a whole. When they do ask for help as women, it is usually aimed at keeping the farm in the family, for information to enable them to farm, or for recognition of the part they already play.

Recommendations

The results of our study lead us to two broad recommendations. Repeated findings of substantial differences in the information levels of farm women and men suggest consideration of information programs tailored to the special needs of women, especially those farming alone. In particular, we suggest that existing distribution channels be examined to determine whether current procedures tend to bypass communication channels most often used by women.

Second, our data suggest that past research and administrative practice, by adhering to excessively narrow legal and functional definitions of farm operatorship, may have failed in important ways to recognize the roles and contributions of women on family farms. Policy administrators have historically identified a single individual (traditionally the male head of household) who can be labelled "the operator" and vested with sole authority to speak and act for the enterprise. We found that American farm women occupy virtually every point on the farm involvement continuum, from total non-involvement, through equal sharing with a spouse or partner, up to single-handed management. Yet, up to now, only those at the very highest involvement levels have been afforded recognition as operators or producers. Women consigned to non-operator status have been largely ignored, sometimes with tragic results when husbands die.

Our findings suggest that on family farms, operatorship is often a family function, shared to varying degrees by husbands and wives, and sometimes others as well. The fact that men and women do not have identical activity profiles, or that men have generally higher involvement levels than their wives is not sufficient cause to exclude women from consideration as partners or co-operators for their enterprises. We urge that an accurate understanding of farm women's positions and contributions be made the cornerstone of future policy. We hope that the results from this survey will assist policy makers and administrators in reaching an adequately complex and differentiated view of women's roles as they continue to influence the social, legal and economic policies which will affect these women's lives.

PREFACE

The Survey of Farm Women was carried out under Cooperative Research Agreement 58-319T-9-0376 between the National Opinion Research Center and the former Economics and Statistics Service of the U.S. Department of Agriculture. The NORC staff for this project included Calvin Jones, Project Director; Rachel Rosenfeld, Principal Investigator; and Lorayn Olson, Research Assistant. Paul B. Sheatsley, a Senior Survey Director at NORC, contributed much to the development of the questionnaire and the overall survey design. In writing this report, Jones has taken the responsibility for reporting on the technical details of the survey itself and on the results with respect to program participation and other contact with USDA, and Rosenfeld has taken responsibility for presenting the results with respect to women's work and their socioeconomic and demographic characteristics. Thus Rosenfeld wrote most of Chapters 2 and 3 and Appendix B (with the assistance of Lorayn Olson), and Jones, Chapters 4 and 5.

We are indebted to Peggy Ross, Project Officer of the Economic Development Division within the Economic Research Service at USDA, and Frances Hill, Assistant Professor of Political Science, University of Texas, who served as consultant to the project. Carol J. Forbes originally proposed the research and contributed to its early phases. We would also like to thank Norman D. Beller, formerly of ESS, and Peggy Weidenhamer and Jack Nealon of the Statistical Research Division for their work on the sample design and the questionnaire. The assistance of Chris Regan of the Agricultural Stabilization and Conservation Service, Claude Bennet of the Science and Education Administration, Glenn Black of the Soil Conservation Service, and

Bill Briscoe of the Farmers' Home Administration was valuable in developing questionnaire items on USDA programs. We gratefully acknowledge the contributions of a number of farm women and USDA officials who reviewed early drafts of the survey instrument and returned helpful advice.

There are many people at NORC to whom we are grateful as well. Norman Bradburn and Paul Sheatsley made useful comments on the report. Madel Diamondstein supervised all aspects of data collection. Susan Campbell (editor), Norman Pecora (editorial assistant), and the Word Processing Department all contributed to the production of the report.

Finally, we add our special thanks to the 2,509 women and 569 men who provided the responses on which this report is based.

1. INTRODUCTION

Women are an important part of family farms. While the farm population has been declining, the proportion of farm operators who are women has actually been increasing: over 6 percent of all farm operators are now women. Also, about 85 percent of male operators have wives present. But little is known about these women. Over the years, there have been a number of small studies of farm women, small both in the number of people interviewed and in the geographical scope of the research (see references in Joyce and Leadley, 1977, and in Chapter 2). While such small studies are often able to give detailed pictures of the lives of their subjects, they are limited in their generalizability. General population surveys are of little use in the study of farm women. Since women in any farm occupation made up less than 2 percent of the population of employed women between 1970 and 1979 (U.S. Department of Labor, 1980), and since the proportion of families on farms is small relative to the total U.S. population, the number of farm women who fall into national samples is small. Further, the very ways in which occupations and employment are defined by the U.S. Census make it difficult to find women involved in farming in Census data, since women are often categorized by their off-farm occupations or not recognized as working on the farm if the survey happens to refer to a time when farm work is slack (see Boulding, 1979). Even when a large-scale data base such as that created by the Census is used to study farm women (e.g., as in Sweet, 1972), only limited aspects of their involvement with agriculture can be tapped. In general, during a decade when there has been increasing interest in the social and economic position of women, the position of farm women remains a mystery.

In theory, the United States Department of Agriculture's (USDA's) client populations include all farmers and ranchers, yet the agency has known very little about the women in this group. Encouraged by the growing interest in family farms and their structure and by allegations of discrimination against women, in 1979 the Department decided to allocate funds for a nationwide telephone survey of farm women. Under an ongoing cooperative agreement with USDA, the National Opinion Research Center (NORC) had undertaken other surveys of the farm population (see for example, Jones et al., 1979; Jones, 1980) and thus had demonstrated its ability to conduct surveys of this population. In August 1979, NORC submitted a proposal for a cooperative research agreement with USDA to carry out the Farm Women's Survey; this agreement was accepted in October 1979.

Research Objectives

The study had four major objectives:

- The collection of basic information from a representative sample of farm women, such as their involvement in the work and management of their operations, memberships in farm and community organizations, and participation in the off-farm labor force
- The measurement of farm women's experiences with the program activities of the U.S. Department of Agriculture, and their perceptions of those experiences
- The analysis of collected data with the aim of identifying those factors having the greatest influence on women's involvement in their enterprises and in USDA programs
- The comparison of farm women's responses with those from a sample of male farm operators

Questionnaire Design

NORC designed the questionnaire that was administered to the farm women (and to a subsample of farm men, as described below) with the assistance and cooperation of USDA researchers. During the fall of 1979, the NORC staff for the Farm Women's Survey reviewed the literature on farm women and government descriptions of program participation, conducted a focus group interview with twelve central Illinois farm women, attended and talked with delegates at the National Young Farmers Educational Institute in Toledo, Ohio, and sent letters to a wide range of researchers, organizations, and policymakers soliciting suggestions and recommendations for the survey. In the spring, we met with USDA personnel, project consultant Dr. Francis Hill (assistant professor of government at the University of Texas, who had done in-depth studies of farm women in Wisconsin), and several farm women who had been appointed special consultants by the Secretary of Agriculture. Finally, NORC pretested the completed questionnaire on a small number of respondents similar to the ones in the actual sample, using procedures identical to those planned for the full survey. Pretest data guided the final revisions of the questionnaire. Throughout the questionnaire design process, NORC's aim was to develop an instrument that would reflect the concerns and language of farm women of all types and fulfill the goals of USDA in sponsoring this survey.

Given that a major impetus for the survey was concern with farm women's participation in and perceptions of USDA programs, the questionnaire devoted a considerable amount of attention to these issues. (See Appendix C for text of the questionnaires.) In order to ask questions that were relevant to given programs, NORC and USDA decided to concentrate on programs of four USDA agencies: the Price Support Program (or Commodity Loan Program) of the Agricultural Stabilization and Conservation Service (ASCS), the Conservation Operation Program run by the Soil Conservation Service (SCS), Farmers Home Administration (FmHA) loan programs, and a variety of Extension programs. These programs were chosen because they involved large numbers of participants nationally. As part of the questionnaire design, NORC consulted with members of the agency responsible for each program, who reviewed questions to see that they accurately reflected the process of participating. Since the participating unit for many programs is usually the operation or enterprise, the questions ask not only about the women's involvement in the program but also about the operations' participation. Respondents also were asked about their contact with program agency personnel, on the assumption that women might be blocked from direct involvement in USDA programs by unresponsiveness or discouragement on the part of USDA personnel in various business contacts.

In addition, the Farm Women's Survey was designed to measure the range of women's involvement in their operations, in both labor and management. Overall, our intention was to begin to fill in gaps in knowledge about the extent to which women's contributions are important to the survival of their families' farms. Moreover, we hypothesized that women's involvement in agricultural organizations and their operations would be an essential ingredient in their participation in USDA programs and in their general attitudes toward USDA. The questionnaire, therefore, included a number of questions on the woman's involvement in the tasks done on the operation, in the decision-making for it, and in agricultural organizations and committees. Recognizing that women work and are organizationally involved outside agriculture as well, we also included questions on community organizational membership and off-farm employment.

A third set of questions dealt with the characteristics of the farms on which the women lived (size, region, principal products, and work force for the operation) and with the women's social and economic characteristics (education, race, marital status, husband's education, etc.). These questions were asked to provide measures of factors that might explain women's involvement in and attitudes toward their own operations, agricultural organizations, the labor market, and USDA programs.

The research design also included interviews with farm men on a 25 percent subsample of the operations in the sample. They were asked about a subset of items on the women's questionnaires. Data from the men can be especially important in the analysis of women's experiences with and perceptions of USDA programs. In the absence of a uniformly applicable yardstick, data from men provide a standard of comparison for interpreting the women's responses. Interviewing men allowed us to compare data from members of the same household as well, since most of the men interviewed were husbands of the women respondents. In general, items on the two questionnaires were worded identically. One noteworthy exception is that women were asked about their own involvement in a series of farm tasks, while men were asked for their perceptions of their wives' involvement.

The Sample

The sampling frame for the survey was developed by the Economics and Statistics Service of USDA. It was an economic area frame, covering the forty-eight coterminous states, identical to that used in USDA's Point of Purchase survey. The area frame is based on land use stratification within each state, with the sampling unit being the parcel of land or land area. The frame included all individuals who qualified as farm operators within the stratified sample of land segments. In all, the initial sample provided to NORC included 4,060 unique farm operations. (See Appendix D for discussion of the definition of regions within this sampling frame.)

The respondents sampled from this frame were: (1) the 1978 operator, if a woman; or (2) the wife (even if divorced or widowed) of the 1978 male operator. In addition, a 25 percent subsample of the eligible male operators was contacted. All designated respondents were screened on whether they were still farming on a commercial basis at the time of the survey. Only those who responded that they (or their spouses) were still farming were included in the survey. Those who had left agriculture were excluded; and, given the nature of the sampling frame, those who had entered agriculture during 1979 and 1980 were also excluded. Thus, generalizations from this sample are limited to the population of those farming in 1978 and still in business in 1980. While this definition applies to the overwhelming majority of operations in 1980, the reader should keep in mind that this population is likely to be older, more stable, and more successful than the total population of agricultural enterprises operating during 1980.

All the women in the sample were either married to or were themselves operators of agricultural enterprises. They are not all "farm" women; however. In fact, when asked whether their operation was a farm, ranch, or something else, 82 percent said farm, 12 percent said ranch, and 5 percent used another term. While recognizing this variation, we will usually use the term "farm women" rather than some more awkward specification to describe women respondents.

The sample design, a stratified multi-stage area probability sample with disproportionate selection probabilities, is complex and not self-weighting. Case weights (expansion factors) for each selected operation were supplied to NORC with the original sample by USDA. The expansion factors were rescaled (on a state-by-state basis) to fractional weights with an average of unity, producing a weighted data base with the number of cases identical to the actual number of completed interviews. Rescaling was done separately for men and women respondents, and also for the data set containing husband-wife pairs (the household or "operation" file). All results in this report are based on the weighted data, although there is almost no difference in the distributions and associations from weighted and unweighted data.

All analysis reported here was conducted using routines of the Statistical Package for the Social Sciences (SPSS), Version 9A, supported by the Computation Center at the University of Chicago. SPSS procedures calculate sampling statistics assuming a simple random sampling (SRS) design, which is, strictly speaking, inappropriate for this dataset. In carrying out our analysis, however, we decided against attempting to compute a design effect that would enable us to approximate estimates of true standard errors under the design used, concluding that there is no uniformly accepted way to compute that effect for the wide variety of statistics used. In our judgement, the relative gains in efficiency over an SRS design of the stratification employed in this design are probably somewhat outweighed by the losses in efficiency due to geographical clustering and the disparities in selection probabilities across strata. On the assumption that the sample is thus slightly less efficient than an equal-sized SRS design, we have continued to use SPSS procedures, but have chosen a more demanding statistical criterion (the .01 alpha level) for the detection of significant effects than is customarily used in social research (the .05 level). In general, effects reported are significant at the .01 level, with some findings whose statistical significance is between .01 and .05 reported as "borderline" effects.

Data Collection

All interviewing for this study was conducted by telephone from NORC's central offices on the campus of the University of Chicago. Use of the University's Wide Area Telephone Service (WATS) lines helped to minimize the costs of data collection. In addition, interviewing was concentrated in the evening hours and on weekends, when WATS rates are lowest and farm family members are most likely to be available for interviews.

Twenty-five interviewers were employed during the field period. A staff of five Field Supervisors handled scheduling of interviewers, assignment of cases, editing of completed interviews, monitoring of interviewer performance and troubleshooting. In a few cases, supervisors were called upon to conduct interviews with especially reluctant or sensitive respondents.

Newly hired interviewers (11 in all) were given two full days of General Interviewer Training culminating in a proficiency test to determine suitability for assignment to the Farm Women's Survey. All twenty-five interviewers then participated in three full days of study-specific briefing, focusing strictly on the survey materials and procedures for the USDA study. Briefing sessions included detailed discussion of the questionnaires on an item-by-item basis, mock (practice) interviews, and quizzes. Interviewers were provided with an instruction manual for use as a reference during the field period.

Telephoning began immediately upon completion of the briefing sessions. Using special switchboard equipment, supervisors unobtrusively monitored the first few interviews conducted by each interviewer, recording any difficulties on an evaluation form. Supervisors then reviewed performance with each interviewer and thereafter monitored portions of interviews on a random basis. Day-to-day problems were handled as they occurred by Field Supervisors and the Assistant Survey Director for the project. In addition, periodic general meetings were called by the Project Director to discuss the progress of the data collection effort and to address any recurrent problems.

The field period began on June 14, 1980 and ended on August 29, just before the Labor Day holiday weekend. Interviews were completed with a total of 2,509 farm women and 569 men. In 497 cases, both husbands and wives in the same household were interviewed. The response rate was 83 percent for women and 74 percent for men. A detailed breakdown of the final disposition for all cases is presented in Table 1.1.

About two weeks prior to the beginning of the field period, all designated respondents were sent an advance letter explaining the purpose of the survey and alerting them to the coming call. In 290 cases (households), the sampling materials supplied to NORC by USDA did not include the telephone number for the operation. Preliminary efforts by NORC interviewers reduced this group to about 130 cases. The advance letter to these households included a request that the respondent call a special NORC number collect in order to participate in the interview. By the end of the field period, there were only 75 households that had never been contacted because of lack of phone numbers.

While interviewers succeeded in completing the interview on their first call in 34 percent of the cases, the first attempt more often resulted in an appointment for interview at a later time or in a failure to find the designated respondent at home. Altogether, about three-quarters of the interviews were completed with four attempts or fewer. Intensive efforts were made to trace respondents who had moved or who had changed

TABLE 1.1

FINAL STATUS OF CASES - 1980 FARM WOMEN'S SURVEY

Variable	Completed Cases		Not Completed		Not Eligible[a]		Completion Rate (Percent)
	Completed without Difficulty	Completed After Initial Refusal	Refusal/ Breakoff	Other Not Completed[b]	Deceased/ Did Not Exist	No Longer Farming	
Northeast							
Women	581	72	125	46	90	171	79
Men	149	4	33	16	20	45	76
Total	730	76	158	62	110	216	79
North Central							
Women	594	94	128	11	98	179	83
Men	155	12	29	20	8	48	77
Total	749	106	157	31	106	227	82
South							
Women	472	67	69	43	60	193	83
Men	113	5	28	17	12	49	72
Total	585	72	97	60	72	242	81
West							
Women	562	67	69	36	78	155	86
Men	124	7	28	28	10	40	70
Total	686	74	97	64	88	195	83
Overall							
Women	2,209	300	391	136	326	698	83
Men	541	28	118	81	50	182	74
Total	2,750	328	509	217	376	880	81

[a] Ineligible cases were excluded from the denominator in calculating response rates.

[b] Includes designated respondents who could not be located; who could not be contacted during the 11-week field period; whose age or health prevented participation; or whose primary language was other than English.

phone numbers. Of the 3,078 completed cases, 328 (about 11 percent) initially refused to participate, but were subsequently persuaded by interviewers or supervisors specially trained to answer the questions of reluctant respondents. An additional 509 cases (13 percent of the total eligible cases) insistently refused to be interviewed.

Overall, interviews were completed with 81 percent of eligible respondents (Table 1.1). The lack of survey data from 19 percent of the sample is a potential source of error in survey estimates. If non-respondents have characteristics and opinions which are substantially different from those of respondents, the resulting bias might well exceed the bounds of sampling error. The question thus arises whether further manipulation of the case weights is advisable in order to adjust for non-response. Because such adjustments are likely to be time consuming and costly, the expected net gains in accuracy should be considered.

In fact, estimating the expected effect of nonresponse adjustment on survey statistics is not a simple matter. Moreover, there is no uniformly accepted way of making adjustments: the strategy one chooses depends closely upon the parameter being estimated and the assumptions which can be made about how nonrespondents would have answered survey questions *if they had actually been interviewed*. If the assumptions do not hold, non-response adjustments risk introducing even greater bias into survey estimates. Moreover, recent research on large scale social datasets (see Smith, 1981), has demonstrated that the various approaches to non-response adjustments do not lead to convergent results.

In analyzing data from the Farm Women's Survey, we have decided against further manipulation of the data to account for nonresponse. Instead, we present our findings subject to the general qualification that they are derived from the responses of over 80 percent of the designated sample. In general, non-response bias will be quite small unless the actual differences in characteristics and opinions between respondents and nonrespondents is very large. Previous analysis of data from farm operators suggests that the extent of difference between respondents and nonrespondents is related to the reason for nonresponse: those who are difficult to contact and interview tend to be similar to respondents who are willing participants, while only those who are reluctant to participate exhibit substantial differences (see Jones, et al., 1979). The relatively low refusal rate in the current survey suggests that nonresponse bias is not a serious threat to the validity of the data.

Respondent confidentiality is important on any survey, and particularly so in cases of samples drawn from limited geographical areas. Protection of confidentiality received special attention in all written and training materials developed for this survey. In addition, identifying information for all respondents was kept only on questionnaire face sheets, which were separated from the interview protocols, stored under lock and key in NORC's offices during the period of data preparation, and finally destroyed. Confidentiality can also be threatened by party lines in rural communities with limited telephone service. Calls for a given phone number may ring on several others, raising the possibility of eavesdropping. Anticipating this difficulty, any respondent concerned about privacy was asked to call NORC collect at a time of his or her choosing to complete the interview.

Organization of the Report

The next two chapters look at the types of work women do on their operations, in the home, and in the community. Chapter 2 describes, the range of women's task performance on their operations, the decisions they make, their membership in different types of farm organizations, and their off-farm employment and membership in community organizations. It looks at some of the differences among women by age, marital status, region, and so forth, in their participation in these spheres, as well as in their attitudes toward farming and their place on their operations.

Chapter 3 looks in more detail at the factors that predict the proportion of various types of tasks and decisions in which women are involved. It looks simultaneously at the influence of a number of the operations' and the women's characteristics, to get a better sense of which women are more involved in running and managing their operations.

Chapter 4 explores the experiences of women with the four chosen USDA programs and their attitudes toward those experiences and toward the programs and USDA as well. The experiences and attitudes of the male respondents are introduced as a standard of comparison.

Chapter 5 presents conclusions and recommendations. In addition, by analyzing responses to open-ended questions, we discuss respondents' views on Federal agricultural policy in general. Both men and women were asked to name the single most important thing USDA could do to help farm and ranch people. Although the response patterns for males and females are quite similar overall, some significant differences are described.

Finally, we examine responses to a final item (asked of female respondents only) concerning the most important thing USDA could do to help farm and ranch women exclusively. Perhaps more than any other findings in our study, the answer given to this question highlight the diversity in the interests and concerns of American farm women.

2. FARM WOMEN'S INVOLVEMENT IN FARM, HOME, AND COMMUNITY WORK: A DESCRIPTIVE ANALYSIS

Rachel A. Rosenfeld

The Farm Women's Survey set out, in part, to document the types of work farm women do. Several studies have attempted this to some extent. However, they were usually based on small samples from restricted geographical areas, which allowed more extensive and intensive data to be collected but restricted generalization.[1] When the data are from national samples or a Census, usually only limited types of work can be studied. Sweet (1972), for example, could look only at the labor market (i.e., off-farm) work of farm women. To our knowledge, the Farm Women's Survey is the first national study of farm women to attempt to examine their work in a variety of settings.

One would expect that at least some women are very deeply involved in running their operations. At the same time, one would expect variation in the amount and type of work that women contribute to their farms or ranches--farm women are a heterogeneous group. Various typologies have been used to capture this variation (Kohl, 1976; Pearson, 1979; Lodwick and Fassinger, 1979). Pearson, for example, suggests that women range from being independent producers to agricultural partners to farm helpers to farm homemakers, with the latter having little participation in the work of the farm per se.

In this chapter we will be concerned with both the overall levels of women's contributions to their operations and in the variation in these contributions. We will examine both the tasks the women perform on the operation and their participation in decision-making for the operation. We will also look at their involvement in agricultural organization. Further, we will briefly investigate women's satisfaction with their life on the farm and with their level of responsibility for decisions as well as their own occupational identification and feeling of competence with respect to the operation.

Farm-related work is only one type of work that farm women do. Most women work on household tasks as well. Many hold jobs in family businesses other than the farm or are employed off-the-farm. In addition, many belong to community organizations. We will describe farm women's involvement in this work also.

Women's Involvement in Work of the Operation and Home

Many of these women have a long history of living or working in an agricultural setting. Overall, just under 60 percent said that they had grown up on a farm or ranch. As Table 2.1 shows, however, there is

TABLE 2.1

WHERE WOMEN RESPONDENTS GREW UP
(Percent)

Where Grew Up	Region[a]				Total[b]
	Northeast	Midwest	South	West	
Farm or ranch	46	67	67	55	59
Somewhere else ...	54	33	33	45	41
Total	100	100	100	100	100
(N)[b]	(647)	(680)	(537)	(623)	(2,487)

[a] See Appendix D for definition of regions.

[b] N differs from 2,509 because of missing data.

significant regional variation. Two-thirds of the women in the Midwest and South reported growing up on farms, compared with 55 percent of the women in the West and less than half of those in the Northeast. (See Appendix D for the definition of the regions.)

In comparison with men, women in the four regions reported spending from three to seven fewer years on average living or working on farms and slightly smaller percentages of their lifetimes (Table 2.2). These differences are not great, however, and should not obscure the basic point that our sample of women has spent an average of thirty years, or nearly two-thirds of their lives, living or working on farms or ranches, with some regional variation.

TABLE 2.2

TIME RESPONDENTS HAVE LIVED ON FARMS--AVERAGE NUMBER OF YEARS AND PERCENT OF LIFETIME

	Region				Total[a]
	Northeast	Midwest	South	West	
Women					
Average years lived on farm	28	33	32	28	30
Years lived on farm as a percent of respondent's lifetime	59%	69%	65%	57%	63%
(N)	(650)	(685)	(532)	(625)	(2,491)
Men					
Average years lived on farm	31	38	39	34	35
Years lived on farm as a percent of respondent's lifetime	66%	78%	74%	67%	71%
(N)	(155)	(162)	(115)	(134)	(566)

[a] N's differ from 2,509 for women and 569 for men because of missing data.

Women's legal relationship to the land they operate depends on whether the land is owned or rented. With no regional variation, 88 percent of the women reported that at least some of their operations' land was owned, and in 89 percent of these cases (78 percent of the whole sample) women reported that their own names were on the deeds or titles to the land. Among the 39 percent who reported that at least some of their land was rented, only 27 percent (11 percent of the entire female sample) reported that their names were on the leases or rental contracts (see Table 2.3).

The women were asked about their involvement in a set of tasks done on the operation and in the home--whether each task was a regular duty for them, something they did occasionally, or something they never did. These home and farm tasks are show in Table 2.4. Naturally, the measured range of involvement of the woman on the operation depends on the exact farm tasks listed and on whether or not these tasks are even relevant to the operation. If there are not animals on the operation, the woman could not be expected to participate in taking care of livestock. A woman who participates in many tasks necessary to produce a fruit crop might appear to have low participation if none of those tasks

TABLE 2.3

RESPONDENT'S LEGAL RELATIONSHIP TO HER FARMLAND
(Percent)

	Respondent's own name on deed or title	Respondent's own name on rental contract
Percent	88	27
(N)	(2,210)	(969)

NOTE: N of cases limited to respondents who reported that their operations included owned or rented land.

TABLE 2.4

FARM WOMEN'S INVOLVEMENT IN FARM AND HOME TASKS
(Percent)

	Percentage Responding			Total percent	N[b]
	Regular Duty	Occasionally	Never		
A. Plowing, disking, cultivating or planting	11	26	63	100	2.257
B. Applying fertilizers, herbicides, or insecticides	5	12	83	100	2,377
C. Doing other field work without machinery	17	25	58	100	2,281
D. Harvesting crops or other products, including running machinery or trucks	22	29	49	100	2,351
E. Taking care of farm animals, including herding or milking dairy cattle	37	29	34	100	1,944
F. Running farm errands, such as picking up repair parts or supplies	47	38	15	100	2,483
G. Making major purchases of farm or ranch supplies and equipment	14	23	63	100	2,455
H. Marketing your products--that is, dealing with wholesale buyers or selling directly to consumers	15	18	67	100	2,380
I. Bookkeeping, maintaining records, paying bills, or preparing tax forms for the operation	61	17	22	100	2,489
J. Doing household tasks like preparing meals, housecleaning, and so on[a]	97	2	1	100	2,499
K. Supervising the farm work of other family members	24	26	50	100	2,060
L. Supervising the work of hired farm labor	11	25	64	100	1,643
M. Taking care of a vegetable garden or animals for family consuption	74	14	12	100	2,350
N. Looking after children[a]	74	13	13	100	1,846
O. Working on a family or in-home business other than farm or ranch work[a]............	34	13	53	100	1,139

---

[a] Items excluded from indices of farm tasks.

[b] Total excludes those who say task was "not done" on their operation.

were on the questionnaire. In designing the list of tasks, we tried to make it as representative and inclusive as possible while still keeping the list to a manageable length. The percentages for each item in Table 2.4 apply only to operations where the specific task is done. For example, the 562 cases whose operations have no animals to care for are excluded from the percentages for item E in the table.

The proportion of women doing a task depended on the nature of the task. Most frequently, women reported regularly taking care of a vegetable garden or animals for the family's food (74 percent), doing the bookkeeping (61 percent), and running farm errands (47 percent) (Table 2.4).[2] Taking care of farm animals (which can include milking) and helping with harvesting are tasks done at least occasionally by over half of the women on operations where these tasks are done. Somewhat less than half do other field work and supervise family members in their work at least occasionally (42 percent and 49 percent). Between 40 percent and 30 percent report some involvement in plowing or doing other field work with machines, making major purchases, supervising hired hands, and marketing products. Women are least likely to help apply herbicides, fertilizers, or insecticides (83 percent of those on operations where this is done say they never do it).

By combining selected items from the list of tasks, we can construct a summary measure of women's involvement in farm work which will reveal the range or diversity of each respondent's task involvement. Conceptually, such a measure should not be confused with a broader index of overall involvement in farm work, which would require the integration of much more information about the structure of each operation's work environment than we were able to collect in this survey. Ideally, a work involvement measure would express an individual's contribution as a proportion of all relevant work done on an operation and would include a time dimension as well as a diversity dimension. Apart from respondents' subjective judgments about whether they are regularly, occasionally, or not at all involved in given tasks, we cannot tell whether even those who perform a task regularly are carrying the major responsibility for that task on their farms. Yet, as we shall see in this and later chapters, the measure of task diversity behaves very much in accordance with our expectations for a more generalized work involvement measure. In one sense, this is not surprising, since the more different farm tasks a respondent does (even if only occasionally), the more time he or she will be likely to spend on farm work. We doubt that this relationship is a perfect one, however, and we caution the reader against interpreting our task involvement (diversity) measure as if it were an ideal substitute for a broader involvement index.

Twelve of the fifteen items specified are farm-related tasks (items J, N, and O may be done on the farm but are assumed to have little to do with production, marketing, or management of the operation). We found that, on average, women reported doing between five and six of the twelve tasks at least occasionally. Of course, not all of the tasks are done on every operation. A simple index of a respondent's labor contribution was constructed by first summing the number of farm tasks each woman reported doing (regularly or occasionally) and dividing by the number of tasks performed by someone on her operation (i.e., excluding those reported "not done"). A second, more stringent index was computed by summing only tasks done regularly and dividing by total tasks performed on that farm. We found, on average, that women reported being at least occasionally involved in about half (52 percent) of the listed farm tasks done on their operations.

Of course, individuals varied considerably around this mean. However, cases of extreme involvement or complete noninvolvement were few, with about 5 percent reporting involvement in all the listed tasks on their operations and only 2 percent specifying that they contributed to none of the tasks. The majority of women (63 percent) claimed to be involved with moderate proportions (from 20 to 80 percent) of the tasks listed for their farms, 13 percent indicated relatively low levels of contribution (less than 20 percent), and a substantial 17 percent reported performing more than 80 percent of the tasks done on their operations.

All in all, significant proportions of these women participate in work on the operation, including field work. However, almost all women (98 percent) report doing household chores regularly. Of course, this work can also be a contribution to the operation, as, for example, when the farm woman prepares meals for those doing farm labor. Another three-fourths care for children (not necessarily their own) regularly. That this proportion is less than the proportion answering that they do housework reflects the age and lifecycle stage of these women. At some time in their lives, almost all would probably have answered "regularly" when asked if involved in child care.

The variety of tasks in which farm women are involved depends on many factors. These will be explored more thoroughly in the next chapter; a few are examined briefly here. First, one might expect the extent of women's involvement to vary by their location since there are regional variations in type of production, availability of employment off the farm (Brown and O'Leary, 1979), and perhaps attitudes toward women's work. Further, involvement in the work of the farm might vary with lifecycle stage. Evidence from other research on farm families suggests that women tend to participate more in the farm work when their children are young, and to be less involved as older sons become partners with their fathers (Wilkening and Ahren, 1979). Table 2.5 shows breakdowns by region and age group for our two indicators of task involvement--percent of tasks done regularly and percent of tasks done at least occasionally.

Differences across regions and age are small; however, they persist across the different ways of measuring range of task involvement and are statistically significant. Basically, women in the South were likely to report doing proportionately fewer farm tasks than women in other regions. According to Sweet (1972), Southern women are also more likely to be employed off-the-farm. (In a later section, we look directly at the relationship between work on the farm and employment off-the-farm.) With respect to age, there is a curvilinear relationship: women increase their involvement over the ages when children are growing up and then reduce it over the ages when their children are grown and when their own strength could be less. Since we have a measure of task involvement at only one time, we cannot say whether age differences reflect what happens as women age or whether they reflect differences by generation.

TABLE 2.5

INVOLVEMENT IN FARM TASKS BY REGION AND BY AGE

Region and Age	Mean percentage of tasks done regularly	Mean percentage of tasks done at least occasionally	N
Region			
Northeast	31[a]	56[a]	653
Northcentral	30	54	687
South	24	45	540
West	32	55	629
			2,509
Age			
18-30	29[a]	54[a]	244
31-45	33	59	873
46-65	28	50	1,194
66-88	22	37	186
			2,497[b]

[a] Differences between means by one-way analysis of variance significant at the .01 level.

[b] This is less than 2,509 because of missing data on birth date.

Another very important factor affecting the range of a woman's involvement on the operation is whether the woman is farming with a husband. Those farming alone might be married, of course, to husbands who are not particularly interested in the operation. But women who are without husbands on a viable operation are perhaps most likely to be Pearson's (1979) "independent producers." She describes such women as "commonly thrust into this role because of death or incapacitation of the farm husband (p. 190)." Of course, there are also some women who have never been married and who take the major responsibility for their operations (Orr, 1979). Ideally, we would have a measure independent of marital status for whether the woman was the principal operator. We did ask such a question, but came up with responses that did not allow us to separate out women who were "independent producers" from those who were "agricultural partners." This question will be discussed later. Here we look at the extent of reported work involvement by marital status.

Very few women in our sample were without husbands. In this study, 96 percent of the women are currently married, 2 percent are currently widowed, 1 percent are divorced or separated, and 1 percent never married.

Table 2.6 shows average involvement in tasks by marital status. Women who are not currently married, especially those divorced or never married, do show a much greater range of involvement in farm tasks. For example, never-married women do, on average, almost 90 percent of the listed farm tasks on their operations at least occasionally, as compared with 52 percent by married women. Widows differ least from married women in this regard, although we will show below that they differ from currently married women in farm decision-making.

To see how husbands viewed their wives' contributions to their operations in part, our survey asked the married men in the sample about the work their wives did, using the same tasks we listed for the women. Among the 497 couples in our survey, the women on average said they regularly did 29 percent of the listed farm tasks done on their operations, while the husbands said on average that their wives did 26 percent of the tasks regularly--a statistically significant but small difference.

TABLE 2.6

WOMEN'S INVOLVEMENT IN OPERATION BY MARITAL STATUS

Marital status	Mean percentage of farm tasks done on operation regularly	Mean percentage of farm tasks done on operation at least occasionally	N[a]
Married	29[b]	52[b]	2,405
Widowed	39	54	57
Divorced	66	80	20
Separated	17	50	5
Never married ...	61	89	19
			2,507

[a] N is less than 2,509 because of respondents not giving marital status.

[b] Differences between means by one-way analysis of variance significant at the .01 level.

Although men tended to underestimate slightly the percent of tasks their wives did regularly, they and their wives agreed on the proportion of tasks wives did at least occasionally--husbands said, on average, 51 percent, while their wives reported, on average, 50 percent. The amount of agreement varies by task but the largest discrepancy is only 8 percentage points (see Figure 2.1). Over all the farm tasks, 60 to 70 percent of the couples agreed on the wife's task involvement. From 16 to 25 percent of the wives reported doing more than their husbands' reports, but 10 to 20 percent of the husbands reported their wives doing more. In general, there is only slight support for the idea that husbands underestimate their wives' work on the operation.

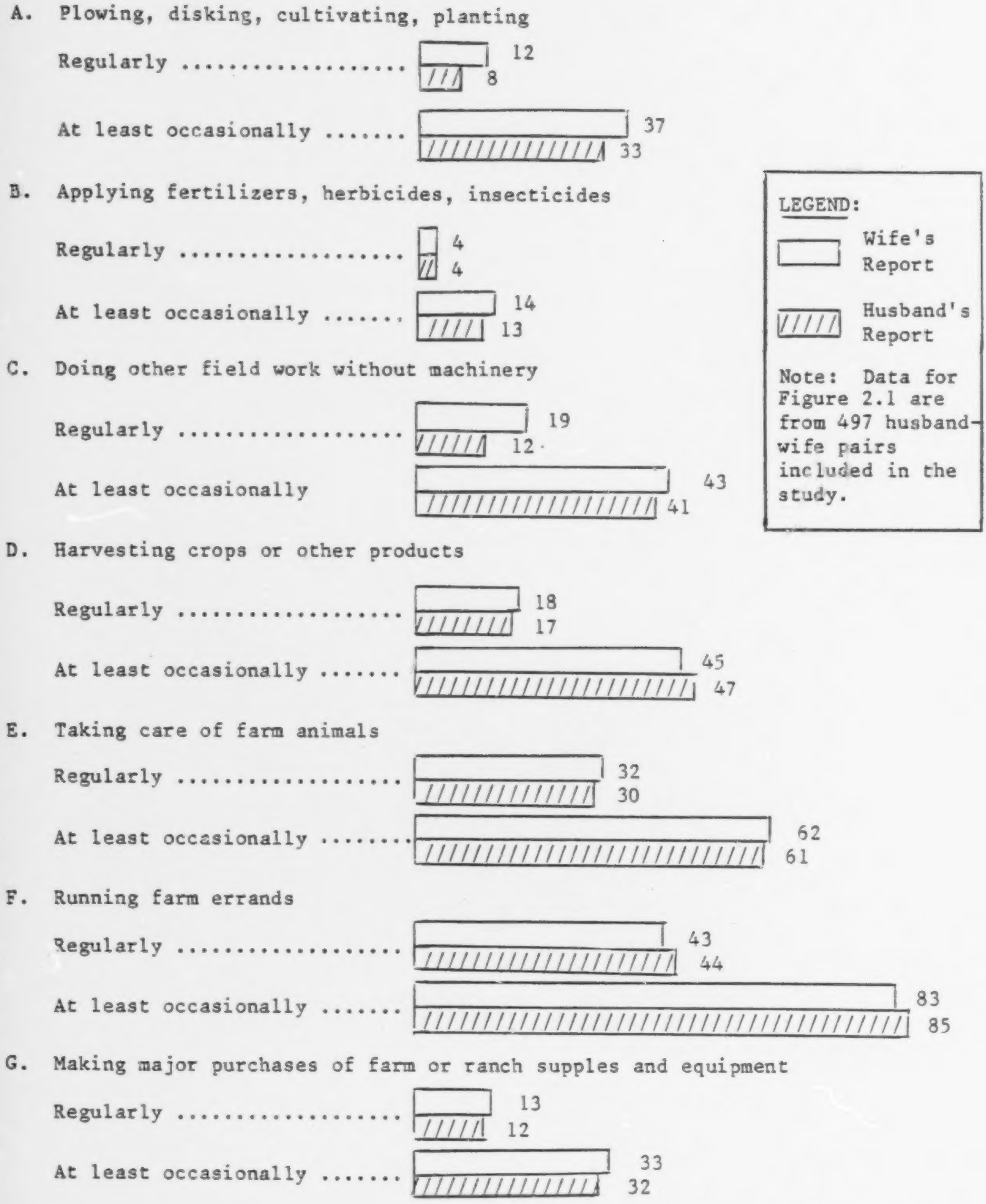


Fig. 2.1. Comparison of husbands' and wives' reports of wives' involvement in home and farm tasks.

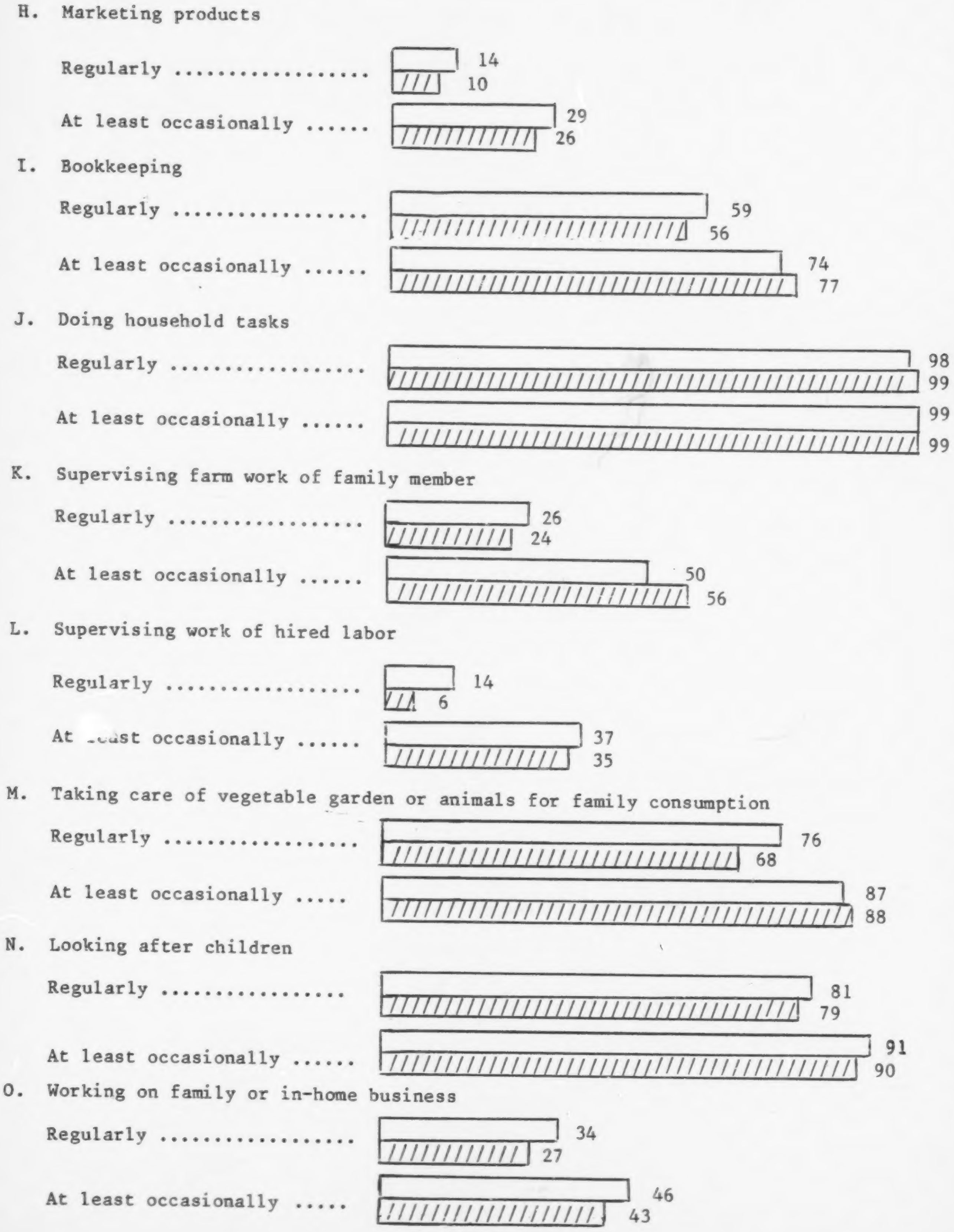


Fig. 2.1.--Continued

Involvement in Decision-Making for the Home and Farm

Some of the most crucial factors influencing the long-range success of an agricultural operation are basic decisions about what commodities to produce, on what scale, with what level of technology, and with what marketing strategy in mind. To take a role in these decisions is to share--in the clearest sense--the ultimate responsibility for the enterprise. To what extent do farm women assume this responsibility?

To examine women's involvement in decision-making, all respondents were asked about family decision patterns for nine specific areas--six basic farm management decisions and three household decisions. For each type of decision, respondents were asked whether they usually made the final decisions themselves, their spouses (or someone else for unmarried respondents) made the final decisions, or they reached the final decision jointly with their spouses (or someone else).

Table 2.7 lists the decision areas and displays the percentages of women who reported each arrangement for each type of decision. (Respondents who indicated that a particular decision had never come up are eliminated from percentages for that item.) Only a very small minority (2 to 4 percent) indicated that they alone had final authority for the six farm decisions. Substantial proportions, however, report sharing decision responsibility in these areas. For example, 58 percent reported sharing in decisions about land purchase or sale, and 50 percent shared land rental decisions. Similarly, just under half participated in final decisions about the purchase of major equipment. When it came to trying a new production practice, producing something new, or selling products, fewer women were involved--around 60 percent said someone else usually made the decision.[3]

TABLE 2.7

FARM WOMEN'S INVOLVEMENT IN HOME AND FARM DECISION-MAKING

Item	Usually respondent	Usually husband/ someone else	Both together	Total Percent	N[a]
Who usually makes final decisions about . . .					
A. Whether to buy or sell land?	3	39	58	100	2,166
B. Whether to rent more or less land?	2	48	50	100	1,915
C. Whether to buy major household appliances?[b].....	22	4	74	100	2,481
D. Whether to buy major farm equipment?	2	52	46	100	2,426
E. Whether to produce something new such as a crop or a new breed or type of livestock?	3	58	39	100	2,174
F. When to sell your products?	4	60	36	100	2,349
G. When to make household repairs?[b]................	24	14	62	100	2,468
H. Whether to try a new production practice?	3	62	35	100	2,125
I. Whether you take a job off the (farm/ranch)?[b]...	41	7	52	100	1,959

[a] Respondents who reported that a particular type of decision had never come up were excluded from that row.

[b] Not included in indices of farm decision-making.

When decisions were to be made about the house--whether to buy major appliances or when to make household repairs--more women made the decision alone (22 percent and 24 percent) or with their husbands (or someone else--74 percent and 62 percent). Husbands rarely made decisions alone with respect to the home, suggesting some division of decision-making labor. When it came to something that affected the woman herself most directly--whether to take a job off the farm--women were most likely to say they decided themselves (41 percent), although over half made the decision with their husbands.

Two summary measures were computed similar to those used in the task analysis above. These indices represent the range of final farm decisions made by respondents alone and jointly with someone else, expressed as proportions of the number of different decisions actually faced on the respondent's operation. (Items C, G, and I in Table 2.7 were excluded from this computation.) As for the task involvement measures, these indices capture the diversity of respondents' involvement in the listed decisions, but do not explicitly include the frequency dimension of decision making (the survey question asked who "usually" made final decisions on the listed topics). Thus, a respondent who is involved in 75 percent of the types of decisions cannot automatically be assumed to take part in 75 percent of all decisions taken. At the same time, we believe that there is a reasonably strong correspondence between our decision diversity measure and a more general index of decision making participation.

Proportionally, the women on average made only 3 percent of the listed types of farm decisions relevant to their operations by themselves, but made 45 percent with their husbands; 94 percent made none of the types of decisions for their operations by themselves, and 26 percent made none jointly. It is worth noting that 18 percent of the women made 100 percent of the types of decisions we asked about jointly or alone.

As Table 2.8 shows, there seems to be some association between having a legal relationship to the land farmed and women's range of involvement in farm tasks and decision-making for the operation. On average, among those who own their land women with their names on the deeds to their land make 3 percent of the listed farm-related types of decisions that apply to their operations by themselves and 47 percent jointly, as compared with 2 percent and 37 percent made singly and jointly by women who do not have their names on the deeds to their land. Among those who rent their land, those with their names on the leases make over twice the percentage of decisions alone as women whose names do not appear on the leases; they are also 8 percentage points ahead in making decisions jointly. The women whose names appear on the titles or leases to their land are also involved in a greater proportion of tasks on their operations. Whether it is landownership (or rentership) itself that affects participation in decision-making and farm tasks or something else connected with the two factors remains to be studied.

Doing tasks on the operation and making decisions about it do not necessarily go together (see Boulding, 1979), although studies that have examined both issues have found that women who are more active in doing work on the operation also tend to be more active in the decision-making (Sawer, 1973; Wilkening and Bharadwaj, 1968). Our data also show a positive relationship between involvement in the farm tasks and decision-making, as measured by a Pearson's correlation coefficient between the percent of farm decisions made and the percent of farm tasks done by each respondent.[4] Here, the correlation between percent of farm

TABLE 2.8

WOMEN'S LEGAL RELATIONSHIP TO THE LAND AND INVOLVEMENT IN FARM TASKS AND DECISION-MAKING

	Mean percentage of farm decisions made alone	Mean percentage of farm decisions made jointly	Mean percentage of farm tasks done on operation		N[a]
			regularly	At least occasionally	
Name on deed or title:					
Yes	3	47[b]	30[b]	54[b]	1,935
No	2	37	24	46	242
					2,177
Name on lease or rental contract:					
Yes	4[b]	49[b]	33[b]	58[b]	262
No	2	41	28	52	636
					898

[a] N's differ from 2,509 because they refer only to those who own or rent land.

[b] Differences between means by one-way analysis of variance significant at the .01 level.

decisions made with the husband and percent of farm tasks done at least occasionally is .45. The relationship is not perfect, but it is positive and strong (see Table 2.9).

TABLE 2.9

PEARSON CORRELATIONS BETWEEN PERCENT OF FARM TASKS DONE BY WOMEN AND PERCENT OF FARM DECISIONS MADE BY WOMAN ALONE AND WITH HUSBAND

	Percent tasks done regularly	Percent tasks done at least occasionally
Percent farm decisions totally made by woman alone	.28	.18
Percent farm decisions usually made by woman and husband	.36	.45

NOTE: N = 2,509 for all correlations.

Given the correlation between women's involvement in farm tasks and decision-making, it is not surprising that the patterns of involvement in decision-making over region, age, and marital status are generally the same as the patterns for tasks (see Tables 2.10 and 2.11). The small but greater percent of types of decisions made alone with greater age probably reflects the overrepresentation of widows at the oldest ages, for widows are more involved in decision-making than married women.

TABLE 2.10

INVOLVEMENT IN FARM DECISION-MAKING BY AGE AND REGION

Region and Age	Mean Percentage of Decisions		N
	Made by Respondent	Made with Husband (or Someone Else)	
Region			
Northeast ...	3[a]	50[a]	653
Northcentral.	1	43	687
South	3	37	540
West	4	48	629
Age			
18-30	1[a]	40[b]	244[c]
31-45	3	47	873
46-65	3	44	1,194
66-88	5	43	186

[a] Differences between means by one-way analysis of variance significant at the .01 level.

[b] Differences between means by one-way analysis of variance significant at the .05 level.

[c] Total differs from 2,509 because of missing data on birthdate.

TABLE 2.11

WOMEN'S INVOLVEMENT IN DECISION-MAKING BY MARITAL STATUS

Marital Status	Mean Percentage of Farm Decisions		N[a]
	Made Alone	Made Jointly	
Married	2[b]	45[b]	2,405
Widowed	38	33	57
Divorced	46	40	20
Separated	3	18	5
Never married .	31	63	19
			2,507

[a] N 's differ from 2,509 because of missing response on marital status.

[b] Differences between means by one-way analysis of variance significant at the .01 level.

Given relatively high average involvement in a range of farm tasks but general lack of autonomous decision-making, would women like to have greater involvement in the decision-making process? In our survey, women were asked, "In general, thinking about the part you have in making decisions for the operation of this (farm/ranch), do you feel that you have too much responsibility for these decisions, or would you like to take a greater part in making these decisions?" Despite the fact that the question wording offered no choice indicating satisfaction with the amount of decision-making responsibility, a great majority (87 percent) said that they thought the responsibility was about right (see Table 2.12).

TABLE 2.12

FARM WOMEN'S ATTITUDE TOWARD RESPONSIBILITY FOR DECISION-MAKING

		Percent	N[a]
	Too much responsibility	3	66
(IF VOLUNTEERED)	About right amount	87	2,174
	Would like greater part	9	232
	Don't know	1	27
	TOTAL	100	2,499

[a] N's less than 2,509 because of missing data.

One reason for this reported satisfaction with decision-making may be that we are not tapping all involvement in the decision-making process with our questions. Decisions about the farm are often made in such a way that it is difficult to assign final responsibility for the decision. The husband may consult a number of people, and the decision may grow out of these consultations. In our focus group discussions, women emphasized that they often influenced decisions indirectly, leaving the ultimate choices to their husbands. However, husbands and wives in our sample closely agree about the extent of joint decision-making, with husbands and wives both saying, on average, that 44 percent of the listed farm decisions done on their operation are made jointly (see also Figure 2.2). Compared with the husbands' responses, women, if anything, tend to underestimate their contributions to decision-making--a minor contrast with the results on work contributions. (See also Wilkening and Morrison, 1963.)

Women's (and Men's) Membership in Farm Organizations

One way to be involved in agriculture beyond one's own operation is to belong to agricultural organizations. Membership in voluntary

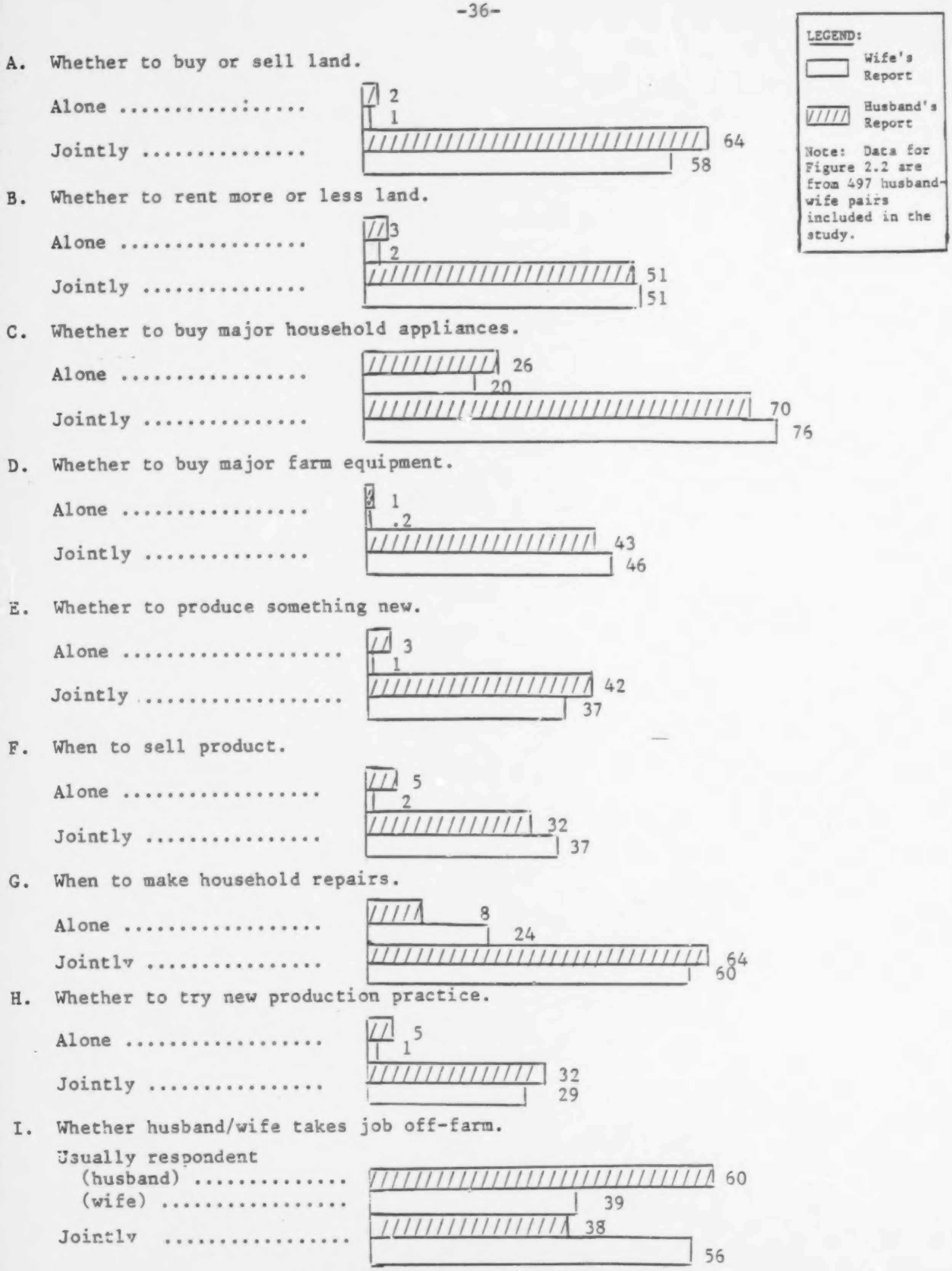


Fig. 2.2. Comparison of husband's and wife's responses on wife's involvement in home and farm decision making.

organizations also brings with it a chance to develop social communications networks, providing an opportunity to meet with others who have similar interests and with whom one can share information, other resources, and fellowship.

Fairly high proportions of farm women belong to agricultural organizations--45 percent belong to at least one of the types of organizations listed. Following the pattern of farm involvement seen before, women from the South are the least likely to belong. By age, however, there are no statistically significant differences in farm organization membership (see Table 2.13). Nor, in contrast with involvement on the operation, are there significant differences in agricultural organization membership by marital status.

TABLE 2.13

WOMEN'S MEMBERSHIP IN AGRICULTURAL ORGANIZATIONS BY REGION, AGE AND MARITAL STATUS

	Average Number[a]	N
Region		
Northeast	.66	653
Northcentral	.88	587
South	.59	540
West	.83	629
Age		
18-30	.73	244
31-45	.75	873
46-65	.77	1,194
66-88	.67	186
Marital status		
Married	.75	2,355
Widowed	.73	57
Divorced	.65	19
Separated	.66	5
Never married	.64	19

[a] Average number of type of organization memberships.

[b] Difference between means by one-way analysis of variance significant at the .01 level.

These women are most likely to belong to general farm organizations, such as the Grange (see Table 2.14), although they are less likely to do so than men, 50 percent of whom belong to general farm organizations. Only 7 percent of the women belong to a women's auxiliary of a general agricultural organization. The same sort of pattern holds for commodity associations--women are less likely to belong than men (8 vs. 17 percent) but do not seem to be making it up in auxillaries. Very few women (only 2 percent) reported belonging to politically or economically oriented women's farm organizations, perhaps because these organizations are relatively new.

Cooperatives are a special type of organization, since they are much more of a business than other organizations. Men's higher membership here could reflect situations where there is only one family membership and that is in the man's name.[5]

Satisfaction with Farming

Most of the women surveyed at least occasionally help with some farm tasks; only 2 percent do not. Many also take part in decision-making for their operations, and almost half belong to some type of agricultural organization. On average, these women have spent two-thirds of their lives on farms or ranches. We have already shown that they tend to be satisfied with the amount of responsibility they have for decision-making on their operations, but what about overall satisfaction with farming? The women (and men) in the sample were asked three questions relevant to their satisfaction with their lives: how satisfied they were with farming/ranching as a way of life, with the communities in which they live, and with farming/ranching as a way to make a living. The distribution of responses to these questions is shown in Table 2.15.

TABLE 2.14

MEMBERSHIP IN FARM ORGANIZATIONS

	Women		Men	
	Percent	N[a]	Percent	N[b]
A. Marketing cooperative	8	2,492	20	568
B. Farm supply cooperative	13	2,486	29	567
C. Any general farm organization, such as the Grange, Farm Bureau, National Farmers Union, or American Agricultural Movement	33	2,496	50	569
D. Any women's auxiliaries of general farm organizations, such as Farm Bureau Women	7	2,499	N.A.	
E. Any commodity producers' associations, such as the American Dairy Association, or National Wheat Producers Association	8	2,500	17	568
F. Any women's auxiliaries of commodity organizations, such as the Cowbelles or the Wheathearts	6	2,502	N.A.	
G. Any women's farm organizations, such as United Farm Wives, American Agri-Women, or Women involved in Farm Economics	2	2,502	N.A.	
Mean number listed types of organizations belonged to	.75		1	
Percent belonging to any listed organization type	45		64	

[a] N's are less than 2,509 because of those responding "Don't Know" or not responding.

[b] N's are less than 569 because of those responding "D.K." or not responding.

TABLE 2.15

SATISFACTION WITH FARMING AS A WAY OF LIFE, AS A WAY TO MAKE A LIVING AND WITH COMMUNITY OF RESIDENCE

(Percent)

	Women			Men		
	Farming/ ranching as a way of life	Farming/ ranching as a way to make a living	Community where live	Farming/ ranching as a way of life	Farming/ ranching as a way to make a living	Community where live
Very satisfied	71	34	77	67	29	78
Somewhat satisfied ...	21	29	19	22	30	18
Somewhat dissatisfied	5	22	3	6	24	3
Very dissatisfied	2	11	1	4	16	1
Don't know	1	4	0	1	1	0
TOTAL	100	100	100	100	100	100
(N)[a]	2,505	2,484	2,500	569	559	564

[a] N's are different from 2,509 or 569 because of missing data.

Overall satisfaction with farming as a way of life and with the communities in which they lived was very high for both men and women: 71 percent of the women and 67 percent of the men were very satisfied with farming/ranching as a way of life. Furthermore, 77 percent of the women and 78 percent of the men were very satisfied with their communities. Combining the very satisfied and somewhat satisfied categories, we find that around 90 percent of both the men and women were basically satisfied with their way of life and community. There is a wider spread of reactions to farming as a way of making a living: about one-third of the women and 40 percent of the men express some dissatisfaction.

Other Work and Community Activities

As mentioned before, these women work at other than farm tasks. Most of the women regularly do household tasks, some of which indirectly contribute to production, and over half of all women respondents regularly take care of children. In addition to working at homemaking and child care, 15 percent of the women work at a family business other than the farm. Further, almost one-third of the women (31 percent) held a job off the farm at the time we surveyed them in the summer of 1980, and another 5 percent were looking for work, for a rough off-farm labor force participation rate of 36 percent.[6]

Since asking about employment at a particular time misses the recent employment experiences of those who have employment at other times (e.g. seasonally) but not at the moment, we gathered information on the jobs that women held either currently or during the last two years. An additional 8 percent of the women reported holding an off-farm job in the last two years. The occupational distributions of the jobs these women held gives an idea of the nature of the work they do outside the farm (Table 2.16). Almost one-third of the "working" women were in clerical occupations (bank tellers, bookkeepers, cashiers, secretaries, teacher's aides), about one-quarter were in professional and technical jobs (teaching, nursing), and 15 percent were service workers (including nurse's aides, cooks, janitors, practical nurses, hairdressers, health aides). That is, these women tend to be in "typical" women's jobs.[7] They are mostly white collar jobs (69 percent are in the first four categories). One might wonder whether those who say they were recently but not currently employed include "seasonal" workers such as teachers and teacher's aides. Looking at the distribution for those who say they are currently employed does not provide support for this idea.

The data for men exhibit significant differences. Among the 49 percent currently or recently employed off the farm, jobs tend to be in the crafts category and the managerial category, with 44 percent in the white collar categories. Such differences are typical of the occupations of the population as a whole. In 1973, for example, 61 percent of U.S. women were in white collar occupations as compared with 40 percent of the men; 31 percent of the women had clerical occupations, as compared with 7 percent of the men; while 1 percent of the women were in crafts jobs as compared with 21 percent of men (Women's Bureau, 1975).

The difference between the types of jobs farm men and women hold is even more striking when one looks at the industries of these jobs (see Table 2.17). Over 40 percent of the women held jobs in professional service industries (e.g., hospitals, schools, libraries, accounting offices), and another 14 percent were in retail trade. Among men, we found a more even distribution over all the industries, with 10 to 20 percent in each

TABLE 2.16

OCCUPATIONAL DISTRIBUTIONS FOR WOMEN AND MEN EMPLOYED OFF THE FARM IN THE LAST TWO YEARS

(Percent)

Occupation	Women	(Only Those Currently Employed)	Men
Professional, Technical	24	25	18
Managerial, Administrative	9	10	18
Sales	6	7	4
Clerical	30	29	3
Crafts	2	2	27
Operative	9	8	13
Transport operative	2	2	5
Laborer, non-farm	1	1	6
Farm managers	0	0	1
Farm laborer	1	1	2
Service worker	15	14	3
Private household	1	1	0
Total	100	100	100
(N)	(968)	(780)	(266)
Mean occupational prestige score	42		42
Work hours:			
≤ 20 hours/week	22		11
< 40 hours/week	49		17
40 hours/week	41		53
35-40 hours/week	50		54

TABLE 2.17

INDUSTRIAL DISTRIBUTIONS FOR WOMEN AND MEN EMPLOYED OFF-THE FARM IN THE LAST TWO YEARS

(Percent)

Industry	Women	Men
Agriculture, forestry, and fisheries	3	6
Mining	0	1
Construction	1	16
Manufacturing - durable goods (e.g., metals, machinery)	6	18
Manufacturing - nondurable goods (e.g., food, textiles)	8	12
Transportation, communications and other public utilities	3	6
Wholesale trade	2	2
Retail trade	14	6
Finance, insurance, real estate	7	3
Business and repair services	1	3
Personal services	5	1
Entertainment and recreational services	1	1
Professional and related services	42	15
Public administration	7	9
Total	100	100
(N)	(963)	(265)

of four categories: construction, manufacturing, professional service, and public administration.[8]

Among those with current or recent employment, 41 percent of the women worked 40 hours a week, 49 percent worked less than 40, and 10 percent worked more than the normal work week. Among the men, 53 percent worked 40 hours a week, 17 percent worked less than that, and 30 percent worked more than 40 hours a week. Thus, over half the women and 83 percent of the men were working with off-farm jobs at least a full work week on a current or recent job.

It was suggested earlier that one reason women in the South are somewhat less likely to participate in farm tasks is that they have employment off the farm (Sweet, 1972; USDA 1979). Indeed, we found that women who live in the South were somewhat more likely to report having a job off the farm at the time of the interview (see Table 2.18). In Table 2.19, we can look directly at whether those who contribute to family income by their off-farm work participate in proportionately fewer of the tasks we listed for the farm, are involved in fewer types of decisions for the operation, or belong to fewer types of farm organizations. In general, the women who currently have off-farm jobs do not differ in

TABLE 2.18

WOMEN'S CURRENT EMPLOYMENT BY REGION

(Percent)

Region				
Northeast	Northcentral	South	West	Total
32% (N=652)	30% (N=686)	36% (N=540)	29% (N=629)	31% (N=2507)

TABLE 2.19

INVOLVEMENT IN FARM TASKS, DECISION-MAKING, AND ORGANIZATIONS BY WHETHER A WOMAN IS EMPLOYED OFF THE FARM AT THE TIME OF THE SURVEY

Employment Status	N[a]	Percent of Listed Tasks Done on Operation		Percent of Listed Decisions Made on Operation		Average Number of Types of Farm Organizations To Which Belong
		Woman Does Regularly	Woman Does At Least Occasionally	Woman Makes Alone	Woman Makes Jointly	
Employed off-farm	784	28	53	3	44	.75
Not employed off-farm	1,718	30[b]	52	3	45	.75

[a] This differs from 2,509 because of missing data.

[b] Differences between means by one-way analysis of variance significant at the .05 level.

any statistically significant way from women without such jobs in the proportion of types of farm tasks, farm decisions, and farm organizations in which they are involved. Only the average percent of listed tasks done regularly shows a small statistical difference between the two groups, and it is only at the .05 level.

Working off the farm can be a way of keeping the farm, of providing needed cash. As Bokemeir et al. (1980:3) put it, "An option to selling the farm and moving to the city is the selling of labor. In 1978, all farm families combined received 56 percent of their income from off-farm sources." We asked women about the main reason they had an off-farm job: 24 percent said that it was at least partially for money for farm-related expenses, and another 33 percent said it was because they needed the money for other reasons. In addition, about 16 percent said they were employed to keep up their career skills, 17 percent said that it was to get out of the house, and 9 percent gave other reasons--which doesn't necessarily mean that the money did not come in handy (see Table 2.20). Seeking work off the farm is probably often a response to low farm income, although it might also indicate a primary commitment to an occupation other than farming.

There has been growing concern about part-time farmers, those men who not only work their operations but also off the farm. Coughenour and Gabbard (1977) find, at least in Kentucky, that such part-time farming is a stable way of life, not part of a transition out of farming. As we have seen, at least a quarter of the women who are employed see their work as contributing directly to the operation. As is true in other studies, in our sample, those families with a smaller net farm income received a greater proportion of their family income (calculated as net farm income plus husband's and wife's off-farm income) from off-farm employment.

TABLE 2.20

REASONS FOR WOMEN'S OFF-FARM EMPLOYMENT

Reason	Percent
A. Main reason for having an off-farm job:[a]	
Keep up, use skills	16
Get out of house, see people	18
Need the money	57
Other	9
Total	100
N	(963)
B. For those who said "Need the money," money needed for:	
Farm-related expenses	19
Other things	58
Both equally	23
Total	100
N	(550)

[a] Asked only of those currently employed or employed since 1978.

Which family member goes to work off the farm--the husband or the wife--on a typical operation is not clear a priori. The wife usually has somewhat more formal education. In our sample, 47 percent had completed high school and another 35 percent had some education beyond high school; among the men, 38 percent had a high school diploma and 33 percent had further education. Women thus may have better opportunities to find jobs, but men can usually find jobs that pay more than the average women's job. Among the men and women who earned something from off-farm jobs in 1979, men earned over twice as much before taxes as women--a median of $15,000 versus about $7,000 (although this does not control for weeks and hours worked during the year). However, if the operation requires additional income, it may call for the off-farm employment of more than one person, or it may require that all family members work on the farm full time (or more than full time). Sweet's (1972) analysis of farm women's employment showed that on average wives of men who are self-employed farmers are less likely to be employed, while those married to men who are both self-employed farmers and receive wages are more likely to be employed, suggesting that either both members of a couple are part-time farmers or neither one is.

In Table 2.21, we look at the employment of husbands and wives jointly, using data from the household file. Statistically, using a chi-square test, we find the employment of wives is not independent of the employment of husbands. In 18 percent of the families both husband and wife are employed, in 44 percent both are not. When one or the other is employed off the farm, there seems to be a greater chance that it is the husband--in twice as many couples, the husband alone is employed off the farm as compared with the number where the wife alone is (26 percent vs. 13 percent). The pattern remains generally the same when one includes those employed off the farm in the last two years as well as those currently employed (bottom half of Table 2.21).

Farm women are also involved in (non-farm) community organizations. Sixty-one percent say that they have belonged to some community organization over the last two or three years. This proportion is somewhat higher than that for men, of whom 57 percent report some recent community organization membership.[9] Nine percent of the women have been elected or appointed to some community governing board (see Table 2.22).

TABLE 2.21

EMPLOYMENT OFF THE FARM OF HUSBANDS AND WIVES

(Percent)

Current off-farm employment of husbands and wives, Summer 1980

Wife Off-farm Employment	Husband Off-farm Employment[a] Yes	No
Yes	18	13
No	26	44

Total ... 101[b]
N = 492

Current or recent off-farm employment of husbands and wives

Wife Off-farm Employment	Husband Off-farm Employment Yes	No
Yes	25	14
No	26	35

Total ... 100
N = 486

---

[a] $\chi^2 (df = 1) = 17.9$, $p < .01$

[b] Total differs from 100 due to rounding.

TABLE 2.22

MEMBERSHIP IN COMMUNITY (NON-FARM) ORGANIZATIONS AND COMMUNITY GOVERNMENT BY SEX

	Percent Yes	
	Women	Men[a]
Membership in any community organization, such as a church group, PTA, League of Women Voters	61 (N=2,503)	57 (N=566)
Election or appointment to local governing board, such as a school board, town council, or county board	9 (N=2,501)	not asked

[a] N's differ from 2,509 for women and 569 for men because of missing data.

One might ask whether some farm women prefer to belong to community organizations rather than farm organizations or whether there are some "organizational" women who typically belong to organizations of all kinds. The latter tends to be the case on average (see Table 2.23); those who belong to some community organization belong to more types of farm organizations than other women.

TABLE 2.23

AVERAGE NUMBER OF TYPES OF FARM ORGANIZATION MEMBERSHIPS BY WHETHER THEY BELONG TO ANY COMMUNITY ORGANIZATIONS (WOMEN ONLY)

Belong to Any Community Organization	Average Number of Type of Farm Organization Memberships[a]	N
Yes	.94	1,499
No	.45	955

[a] Differences between means by one-way analysis of variance significant at the .01 level.

Self-Identification of Farm Women

Very few of the women in our sample are totally uninvolved in the work and management of their operations. On average, they contribute to more than half of the different kinds of tasks we asked about. About three-fourths took part in some of the decision-making that we asked about, and 45 percent belong to one or more types of agricultural organization. There is variation in how much women participate in their farms and ranches and in agricultural organizations, and those high on one dimension tend to be high on others. In addition, substantial proportions of women are employed off the farm and belong to community organizations. With this as background, we now ask, how farm women perceive themselves in terms of their occupations and their ability to run their operations?

One way in which we attempted to explore the women's occupational self-identification was by asking how they described their occupations on their income tax forms. The majority (60 percent) said "wife, mother, housewife, or homemaker." Only 5 percent said "farm wife," and less than 3 percent said "farmer, rancher, or producer." About 30 percent gave some other occupation (usually one associated with their off-farm work, such as teacher or nurse), while 2 percent could not recall (see Table 2.24). Those currently working at an off-farm job were much more likely to report that job as their occupation (see Table 2.25). The term "farm wife" (which some women say they have begun using to emphasize their roles in their families and on their operations) does not seem to have caught on widely, at least not as an entry on tax forms.[10] As can be seen in Table 2.26, women who identified themselves as farm wives and farmers reported doing a greater proportion of tasks on the operation (and belonged to more types of agricultural organizations) than other women. Women who listed "other"

TABLE 2.24

SELF-IDENTIFICATION OF FARM WOMEN

	Percent
1. Occupation on income tax form:	
Wife, mother, housewife	60
Farm wife	5
Farmer, rancher	3
Other	30
Don't know	2
Total	100
N[a]	(2,494)
2. Main operator:	
Yes	55
No	44
Don't know	1
Total	100
N[a]	(2,499)
3. Ability to run farm without husband:[b]	
Definitely yes	25
Probably yes	35
Probably no	18
Definitely no	20
Don't know	2
Total	100
N	(2,395)

[a] N's differ from 2,509 because of missing data.

[b] Asked only if currently married.

TABLE 2.25

OCCUPATION LISTED ON INCOME TAX FORM BY WHETHER WOMAN CURRENTLY EMPLOYED OFF-THE-FARM

(Percent)

Occupation Listed on Income Tax Form	Currently Employed Off the Farm		
	Yes	Not Currently But Within Last 2 Years	No
Wife, mother, homemaker	23	61	81
Farm/Ranch wife	2	3	7
Farmer, rancher, producer	1	4	4
Other	74	32	8
Total	100	100	100
(N)[a]	(754)	(207)	(1,460)

$\chi^2 = 1{,}020$, df = 6, $p < .01$

[a] This differs from 2,509 because of missing data.

occupations and those who described themselves as "homemakers," are virtually identical on one task decision and organizational involvement measures.

On tax forms, only about one farm woman twelve represents herself as a farmer or rancher--or as a farm wife. There are a number of plausible explanations for this result, aside from a lack of identification as a producer. The structure of the tax and Federal Insurance Contributions Act (FICA) laws may make it advantageious to some women to avoid describing themselves as either operators or even employees on their own operations in order to avoid compulsory FICA withdrawals. Moreover,

TABLE 2.26

WOMEN'S OCCUPATIONAL IDENTIFICATION AND INVOLVEMENT ON THE OPERATION AND IN AGRICULTURE

Occupation Listed on Income Tax Form	N[a]	Mean Percentage of Farm Tasks Done Regularly	Mean Perdentage of Farm Tasks Done at Least Occasionally	Mean Percentage of Farm Decisions Made Alone	Mean Percentage of Farm Decisions Made Jointly	Average Number of Types of Farm Organizations Belong to
Wife, mother, homemaker	(1,490)	29[b]	52[b]	2[b]	44[b]	.8[b]
Farm wife	(129)	35	59	.1	58	1.2
Farmer, rancher, producer	(86)	43	65	19	52	1.0
Other	(745)	29	53	4	44	.7

[a] This differs from 2,509 because of missing data.

[b] Differences between means by one-way analysis of variance significant at the .01 level.

women who must report even the smallest amount of income earned from off-farm jobs may feel constrained by law to identify the occupation that produced the reportable income. Tax forms do not routinely provide enough room for filers to enter multiple occupations.

Another question did suggest that women recognize their contributions to their operations, even if they do not call themselves "farmers." We asked each female respondent whether she considered herself to be one of the main operators of the farm or ranch, assuming we would classify those who said yes as "independent producers" (see Pearson, 1979). However, we found that 55 percent responded in the affirmative (see Table 2.24).

Considerable numbers of women consider themselves both as main operators and as homemakers on their income tax forms (see Table 2.27). The question thus arises: What does the self-perception as a main operator mean? Are those who describe themselves this way involved with a greater range of decisions and tasks on the operation and more types of agricultural organizations than those who do not? Looking at percent of tasks done, percent of joint and sole decision-making, and farm organization membership by whether a woman identifies herself as a main operator clearly shows that the answer is yes (Table 2.28).

A third question we asked of women who were currently married was whether, if something should happen to their husbands, they could run their operations on their own. Altogether, just under 60 percent said "yes" or "probably yes," about the same percentage who identify themselves as main operators. Given the greater involvement of those who say they are main operators in the running of an operation, we would expect them to be more likely to say that they could continue to run their operations

TABLE 2.27

OCCUPATION LISTED ON INCOME TAX FORM BY WHETHER WOMAN CONSIDERS HERSELF A MAIN OPERATOR OF HER FARM/RANCH

(Percent)

Occupation Listed on Income Tax Form	Main Operator?	
	Yes	No
Wife, mother, homemaker	59	63
Farm/Ranch wife	7	3
Farmer, rancher, producer	5	2
Other	29	32
Total	100	100
N[a]	(1,350)	(1,083)

NOTE: $\chi^2 = 45.5$, df = 3, $p < .01$.

[a] This differs from 2,509 because of missing data.

without their husbands. As Table 2.29 shows, 69 percent of the women who considered themselves to be one of the main operators said either definitely or probably that they could run the operations by themselves. In contrast, only 48 percent of those who rejected the "main operator" label felt capable of farming alone. Of those who called themselves main operators only 13 percent said they definitely could not, compared with almost 30 percent of those who said they were not main operators. Those who described themselves as farmers, ranchers, or producers on tax forms were most likely to feel they could run their operations without a husband, with nearly three-fourths making this response (see Table 2.30).

TABLE 2.28

WOMEN'S IDENTIFICATION AS MAIN OPERATOR AND INVOLVEMENT ON THE OPERATION AND IN AGRICULTURE

One of the Main Operators	N[a]	Mean Percentage of Farm Tasks Done Regularly	Mean Percentage of Farm Tasks Done at Least Occasionally	Mean Percentage of Farm Decisions Made Alone	Mean Percentage of Farm Decisions Made Jointly	Average Number of Types of Farm Organizations Belong to
Yes	(1,383)	38[b]	64[b]	5[b]	56[b]	.9[b]
No	(1,109)	18	39	1	30	.6

[a] This differs from 2,509 because of missing data.

[b] Differences between means by one-way analysis of variance significant at the .01 level.

TABLE 2.29

ABILITY TO RUN OPERATION WITHOUT HUSBAND BY WHETHER WOMAN REPORTS HERSELF AS A MAIN OPERATOR

Could Run Operation Without Husband?	Main Operator?	
	Yes	No
Definitely yes	31	17
Probably yes	38	31
Probably no	15	21
Definitely no	13	29
Don't know	3	2
Total	100	100
N[a]	(1,294)	(1,085)

[a] This differs from 2,509 because of missing data.

Joyce and Leadley (1977:12) report the results from a 1976 International Harvester survey in which a similar question was asked of farm men and women. They point out that the husbands were not asked if they could run their operations without their wives, who may contribute to the farm in a multitude of ways. We did ask such a question of the men in the sample. Male respondents were more optimistic about running their operations without a spouse than were the women--92 percent said they could definitely or probably run their operations without their wives (see Table 2.31).

TABLE 2.30

ABILITY TO RUN THE OPERATION WITHOUT A HUSBAND BY WOMAN'S OCCUPATION LISTED ON INCOME TAX FORM

(Percent)

Perceived Ability to Run Operation Without Husband	Income Tax Occupation			
	Wife, Mother, Housewife, Homemaker	Farm, Ranch Wife	Farmer, Rancher, Producer	Other
Definitely yes	22	20	49	29
Probably yes	37	40	24	32
Probably no	18	24	10	16
Definitely no	21	12	12	22
Don't know	2	4	5	1
Total	100	100	100	100
(N)[a]	(1,458)	(127)	(65)	(690)

[a] This differs from 2,509 because of missing data.

TABLE 2.31

MEN'S PERCEIVED ABILITY TO FARM WITHOUT A WIFE[a]

(Percent)

Definitely yes	63
Probably yes	29
Probably no	4
Definitely no	2
Don't know	2
Total	100
(N)	(525)

[a] Asked only if wife in household.

Summary and Discussion

In this chapter, we examined various types of work farm women do on the operation and in the community. We found that farm women as a group have had a long association with farming, having spent an average of two-thirds of their lives working or living on farms. Where land is owned, women are very likely to have their names on the deed; they are much less likely to have an explicit legal relationship to rented land. Around half of the women (on operations where these tasks are done) regularly do the bookkeeping, raise food for the family, and run farm related errands. Sizable proportions of women are at least occasionally involved with other types of farm tasks, including field work. On average, women reported at least occasional involvement in over half the listed tasks which were relevant to their operations, with this proportion varying by age, region, marital status, and legal relationship to the operations. We found very few women, however, at either extreme of the task-range distribution. Women were also involved in a range of decisions for their operations, although they rarely made the decisions alone. Again, there was variation by age, marital status, region, and legal relationship to the operation in the proportion of the different farm decisions in which women were involved. Forty-five percent of the women interviewed belonged to one or more types of agricultural organization. In general, these women were quite satisfied with farming as a way of life and with the communities where they lived. They were significantly less satisfied with farming as a way to make a living.

In addition to their involvement on their operations and in agricultural organizations, a third of the women were employed off the farm (typically in white collar jobs), apparently without lowering their participation in their operations or agricultural organizations. One quarter of the employed women reported that the reason for their employment was to provide money for the farm.

When asked how they described themselves on their income tax forms, only 8 percent reported describing themselves as farmers, ranchers, operators, or farm wives; about one-third (about the same proportion as were employed off the farm) listed their off-farm occupations. Yet 55 percent of the women considered themselves "main operators" of their farms or ranches and 60 percent of the married women thought they could at least probably run their operations without their husbands.

Farm women are thus a heterogeneous group. One should not expect a program or service directed at "farm women" as a group to meet the needs of all these women. They are involved at least to some extent both on their operations and outside them. At the same time, considerable numbers do see themselves as running their operations now or in the future. Especially important is the high proportion of women who express some optimism about their ability to manage their operations without their husbands. In serving farm women, their possible future role as producers should be kept in mind, as well as their current activity in a range of aspects of the operation.

Notes to Chapter 2

[1] For examples, see Kohl, 1976, on Saskatchewan women; Hagood, 1977, with intensive data on 254 Carolina piedmont, Georgia, and Alabama families; Capener and Berkowitz, 1976, with data on twenty New York farm families; Pearson, 1979, with data on Colorado farm women; Wilkening, 1980, using samples of Wisconsin farm couples; Hepner, 1979, with an ad hoc sample of almost 200 Illinois farm couples; Boulding, 1979, for an analysis of twenty-seven interviews with Oklahoma, Colorado and Vermont women; Bokemeir et al., 1980, for a report on a sample of Kentucky adults; Lodwick and Fassinger, 1979, with data on sixty-six farm families in Michigan; articles such as Orr, 1979.

[2] This is consistent with what others have found in small scale surveys. Lodwick and Fassinger (1979), for example, in their exploratory study of sixty-six Michigan farm couples listed bookkeeping and bill paying, keeping a garden, and buying/getting machine parts as "core" tasks, performed by at least half the women. These tasks are vital ones. One thing that keeps the family budget in line on a farm is raising one's own food. Bookkeeping is an important task done by many farm women--perhaps increasingly so over the last two decades (Wilkening, 1980). And the role of "go-fer" is one often mentioned in the literature and interviews with women. "'Go-fer' is the glue that holds the modern farm together (Boulding, 1979:17).

[3] Salamon and Keim (1979:115), in their study of a Midwest farm community, also found that men tended to make "the crucial decisions about when to plant, harvest, or sell . . ."

[4] The Pearson correlation coefficient indicates the extent to which someone high on one variable will be high on another--in this case, the extent to which women high on the percent of farm tasks they do are also high on the percent of farm decisions they are involved in. The coefficient ranges from -1 (perfect negative association--someone high on one item is low on another) to 0 (no association) to 1 (perfect positive association).

[5] At least one study (Kau, 1976) of Wisconsin cooperative managers found some indication of interest among women in participating in cooperatives, relatively low actual participation by women, and some very blatant hostility on the part of managers (almost all of whom were male) against women's involvement. Here, however, we do not have such direct information about reasons for levels of involvement.

[6] This figure is a bit below that found among farm women in a 1979 Kentucky sample (38 percent employed, 6 percent unemployed--Bokemier, et al., 1980) and in a small 1978 Michigan study (42 percent employment--Lodwich and Fossinger, 1979), but considerably above that in Wilkening's

largely dairy farm Wisconsin 1978 sample (19 percent), suggesting that area of the country and type of operation have an effect on off-farm work, as do the nature of the sample (all women, married women, etc.) and time of year. Also, this 31 percent off-farm employment rate is about twice the 16 percent nonfarm employment Sweet (1972) reports for April 1960--employment outside the home has been increasing for farm women as well as for the U.S. as a whole, although the employment of farm women (who, as we have seen, work on the farm) is lower than for other women.

[7] The distribution in Bokemeir et al., for Kentucky farm women is very similar to the one here.

[8] Again, see Bokemeir et al., 1980, and Women's Bureau, 1975.

[9] The 61 percent current or recent community organization participation matches the figure for women's current organizational participation in the 1980 General Social Survey, a national survey carried out by NORC. Unless one were to hypothesize that farm women have very unstable organization affiliations, it does not seem that the farm women are less involved in community activities than women in cities, suburbs, or other rural areas.

[10] This theme of purposely not identifying themselves as "farmers" emerged in our focus group interviews, as well as in Boulding's (1979). Most farm women do not think of themselves as farmers, with some saying explicitly that only men can be farmers--and they are not like men.

3. FARM WOMEN'S INVOLVEMENT WITH FARM WORK AND DECISION-MAKING: A MULTIVARIATE ANALYSIS

Rachel A. Rosenfeld

In the last chapter we examined the nature of women's work, on and off the farm, as well as their feelings about the parts they play on their operations and their ability to carry on with the farm alone. We looked at the variation in farm women's work by region, age, marital status, off-farm employment status, and so on, but analyzed the variation using only one factor at a time. We speculated, though, that several things were going on at once. Differences across age categories, in task involvement, for example, were explained as possibly due to some combination of life-cycle stage (e.g., whether there were young children in the family), the availability of the labor power of other adults in the family, physical ability, and generational values. Here, we continue to explore the nature of farm women's participation in the tasks and decision-making for their operations and in agricultural organizations, considering simultaneously the effects of several factors on variation in their involvement. The statistical technique used is ordinary least squares (OLS) multiple regression.[1]

Our aim is to discover how the characteristics of the farm, availability of other labor, and such personal attributes as experience, and other work commitments affect the range of tasks and decisions a woman does, as well as the number of types of farm organizations to which she belongs.

The characteristics of the farm we include are its total value and net income. (Total number of acres is another potential measure but was found to be moderately correlated with total value ($r = .44$) and relative uncorrelated with the dependent variables and therefore is not included.) The nature of the operation is further described by the percentage of gross sales from crops (as compared with livestock or animal products) and by region. Given the diversity of operations, since this is a national rather than state or regional sample, we decided to use a rather rough indicator of the operation's output (percent from crops) rather than trying to devise a complicated scheme with more detail.[2]

The labor structure of the operation was measured by the number of other family members (other than husbands) involved with the day-to-day work of the operation, the number of hired hands and other people who were involved, whether the woman was currently married, and whether the husband worked off the farm. The woman's credentials, experience, and other time commitments were measured by her education (less than high school, high school, vocational school, beyond high school or some college, college diploma or higher degree), her race (white/nonwhite), her age, the percent of her life she had lived or worked a farm or ranch, the number of children under six in the family, and whether the woman was employed off the farm. Additionally, the woman's legal relationship to the operation was included, indicated by whether her name was on the title to land that was owned and/or on a rental contract or lease for rented land.

The dependent variables to be explained by these factors are the percent of listed farm tasks done on the farm or ranch that she does at least occasionally and the percent of listed decisions made on the operation that she makes either alone or with someone else. As a contrast with involvement on the operation, we also examine in a third equation the number of types of farm organizations to which women belong. Regression analyses for the percent of tasks a woman does regularly are included as Appendix B. This chapter and Appendix B thus cover the aspects of agricultural involvement we discussed in the previous chapter. The means and variances of the variables included in the analysis are shown in Table 3.1.

There is a problem of simultaneity bias in the analyses reported in this chapter. That is, although we talk about _explaining_ women's involvement in their operations and agricultural organizations, we use as explanatory variables some things that could be _explained by_ that involvement. For example, insofar as a woman contributes labor or income to the operation, she is affecting, as well as being affected by, the economic shape of the operation. As another example, a woman's (and her husband's) employment off the farm could be the result of the extent of their involvement in the operation rather than the reverse. There are statistical techniques that attempt to deal with the problem of which way causality goes, such as two-stage least squares. However, such approaches require data beyond what is available to us and depend on assumptions that are often difficult to support. For the purposes of this chapter, we will use the term "explaining" involvement to mean examining how it depends on characteristics of the operation, the family, and the woman, realizing that such an explanation does not necessarily work in strictly causal terms. Indeed, really to specify which factors cause what, we would need data over time on the operations and the women's work. The results of the multiple regression analysis are shown in Table 3.2.[3]

TABLE 3.1

MEANS AND STANDARD DEVIATIONS FOR FARM INVOLVEMENT, FARM CHARCTERISTICS, FARM LABOR STRUCTURE, AND FARM WOMEN'S CHARACTERISTICS[a]

Item	Mean	Standard Deviation
Percentage of tasks done at least occasionally	53.48	25.78
Percentage of types of decisions made alone or with someone	47.68	37.13
Number of types of agricultural organizations belonged to[b]	.74	1.05
Farm total value (000's of $)	304.52	389.64
Net farm income (000's of $)	12.91	23.09
Percentage of sale from crops	46.42	41.41
Region:		
North Central	.27	.44
Northeast	.26	.44
West	.25	.43
Marital status (1=married, 0=not)	.96	.20
Husband who is employed off farm (1=Yes, 0=No)....	.40	.49
Number of family members (besides spouse) involved in day-to-day farm work	.78	1.26
Number of hired hands and others involved in day-to-day farm work	2.58	6.77
Education:		
Less than high school	.18	.38
Vocational or some college	.22	.42
College degree or above	.12	.33
Race (1=white, 0=nonwhite)	.97	.16
Age	47.16	12.33
Number of children < 6	.22	.57
Percentage of life lived or worked on a farm	62.64	30.28
Employed off farm (0=Y, 1=N)	.68	.47
Name on deed or rental contract	.79	.40

[a] Means and standard deviations are based on the 2,212 cases where there is information available on all variables used in the regression analysis, with the exception of the farm characteristics (where missing values were replaced by means) and the agricultural organization variable.

[b] N = 2,171.

The first pair of columns in Table 3.2 shows the regression results for the proportion of tasks a woman does at least occasionally. (The results for analysis of the percent of tasks done regularly, shown in Appendix B, are very similar to these.) Together, the variables in the equation explain only 17 percent of the variation in task involvement, suggesting that the effects attributed to include predictors must be interpreted with considerable caution. The nature of the operation significantly affects the range of tasks that a woman does on the operation at least occasionally. On operations with lower percent of sales from crops, women tend to be involved in proportionally more tasks. Consistent with the results of the last chapter, women in regions outside the South perform a significantly wider range of tasks, especially women in the West. The size of the operation also affects task involvement--women on operations with lower total value tend to do more tasks at least occasionally. (The effects of farm size are not strong, however, perhaps because of statistical problems discussed in note 2.)

Not all of the numbers of our sample are married, although the overwhelming majority are. Similar to our findings in the preceeding chapter, we find here that, net of everything else, being married strongly reduces the range of a woman's involvement in the work of the operation. However, when she has a husband who is employed off the farm, she tends to do more of the tasks at least occasionally. The wife, then, tends to compensate for the loss of a husband's labor on the operation. With respect to other aspects of the operation's labor structure, however, the results are either nonsignificant or counterintuitive. The number of hired hands and other people not living on the farm who are involved in the day-to-day work of the operation has no significant effect on a woman's tasks involvement. Having more members of the family helping

TABLE 3.2

REGRESSION ANALYSIS OF FARM WOMEN'S INVOLVEMENT IN FARM TASKS, FARM DECISION-MAKING, AND AGRICULTURAL ORGANIZATIONS

Independent variables	Dependent Variables					
	Percent of tasks done on operation woman does at least occasionally (0-100)		Percent of decisions made on the operation woman makes alone or with someone else (0-100)		Number of types of agricultural organizations to which woman belongs	
	Unstandardized coefficient	Standardized coefficient	Unstandardized coefficient	Standardized coefficient	Unstandardized coefficient	Standardized coefficient
Farm total value[b] ...	-.003	-.04*	-.004	-.05*	.0002	.06**
Net farm income[b] ...	-.02	-.02	-.06	-.04	.004	.09**
Percent of sales from crops[b]	-.08	-.13**	-.09	-.10**	-.000	-.002
Region: relative to South						
Northcentral	5.99	.10**	7.06	.08**	.20	.09**
Northeast	7.33	.13**	12.48	.15**	.05	.02
West	8.08	.14**	12.37	.14**	.17	.07*
Marital status (1 = married, 0 = not)	-19.62	-.15**	-31.13	-.17**	.12	.02
Husband who is employed off-farm (1 = yes, 0 = no)	6.32	.12**	9.92	.13**	-.12	-.06*
Number of family members involved in day to day work[a]	1.53	.07**	.35	.01	-.007	-.008
Number of hired hands and others involved in day to day work	-.05	-.01	-.18	-.03	.01	.07**
Education: Relative to high school grad:						
Less than high school	-4.22	-.06**	-1.11	-.01	-.27	-.10**
Vocational or some college ..	3.31	.05*	3.43	.04	.14	.06*
College degree or above	3.13	.04	9.20	.08**	.34	.10**
Race (1= white, 0 = nonwhite) ...	1.23	.007	-.76	-.003	.13	.02
Age	-.55	-.26**	-.06	-.02	-.0007	-.009
Number of children under 6	-3.72	-.08**	-3.68	-.06*	-.004	-.002
Percent of life live or work on farm ..	.11	.13**	.05	.04	.003	.10**
Employed off-farm (0=yes, 1=no)	3.80	.07**	5.35	.07**	-.05	-.02
Name on deeds or rent contracts (1=yes, 0=no) ...	5.63	.09**	9.10	.10**	.23	.09**
Constant	75.53		55.14		.11	
R^2	.17		.10		.09	
N[c]	2,212		2,212		2,171	

*.01< p < .05

**p <.01

[a] Excludes a husband.

[b] Missing values replaced with means.

[c] Ns differ from 2,509 because of missing data.

out, though, actually increases a woman's contribution to tasks in general. The results do not suggest that the labor of other family members substitutes for the general contribution of farm women. However, it could be that having more family members involved in the day-to-day work of the operation changes the nature of demands on women's time: the greater the number of family members involved in running the operation, for example, the greater the proportion of women saying that they regularly have as a task supervising the work of family members. It could also be that with expansion in the potential labor force, the operation expands and then uses this labor pool.

With respect to other characteristics of the woman relevant to the time and ability she has to do farm work, age stands out as an important factor--the older the woman, the less involved she is in doing tasks. However, time-series (longitudinal) data is necessary to determine whether individual women decrease their farm labor over their lifetimes.

Education has some direct effect on task involvement--controlling for other variables, women with less than a high school diploma are less likely to be involved in farm tasks, and women with formal education beyond high school degrees are more likely to be involved. One would expect the effect of education, however, to be mediated by a women's employment, since women with more education have higher credentials to use in the off-farm labor market. In this data set, women with more education are somewhat more likely to be employed, and those who are employed are less likely to be involved in farm tasks (note that in our coding of the employment variable--a high value means not employed). This is in contrast to our earlier results, when we examined the relationship between range of tasks done and off-farm employment without controlling for such things as region and husband's employment.

Race has no effect significantly different from zero, but it also has very little variance in our sample. Farm background plays a part in the extent to which women are involved in farm tasks--the greater the proportion of their lives they have spent on farms, the wider the range of tasks they perform. This could represent either preferences for farm work (after all most of these women had chosen to marry farmers or potential farmers) or the accumulation of skills learned while growing up or over the adult years. Interestingly enough, the relationship between legal ownership or rentership of the land and task involvement does not disappear when all the other variables are controlled. Having a legal title to the land increases the range of task involvement. However, whether women involved in their operation are also more likely to notice if their name is on deeds or leases, or whether direct proprietorship actually increases work motivation is not clear.

The second pair of columns shows the results for decision-making involvement. Again, the proportion of variance explained (R^2) is not very substantial--10 percent. Here, the proportion of one's life spent on a farm or ranch does not affect the proportion of listed farm decisions that a woman makes alone or with someone else. This contradicts our expectation that it would be exactly with respect to decision-making that long term experience in farming would emerge as an important factor. Further examining results of the decision-making equation, we see that, aside from the effects of farm background, regression coefficents are quite simlilar to those for the task involvement model. Women on farms with greater value are less likely to make a large proportion of types of decisions, even net of the number of other people involved in running the operation. They are less likely to participate in a large proportion of types of decisions if they are on operations with greater proportions of sales from crops. Women in regions outside the South, especially the Northeast and West, are involved in a greater proportion of types of decisions. The difference is statistically significant, but whether this represents regional cultural differences or aspects of the operation unmeasured here (such as tenancy) is not clear. Having more family members helping on the operation has no effect on decision involvement--perhaps because the age of the workers has not been controlled. But the presence of younger children, perhaps by preventing a woman from participating in the daily work of the operation, also inhibits participation in making final decisions. Having a husband decreases the range of decision-making participation, while having an employed husband leads a woman to increase her range of decision involvement. College-educated women take part in a greater proportion of decision-making than others, while those employed off the farm (holding other things constant) do less. Again, having one's name on a deed of lease agreement increases involvement. Age, though, has no significant effect.

Involvement in farm organizations (the third set of columns) depends more than involvement in the operation on the size of the farm or ranch: those from operations with greater total value and greater net income, as well as more hired hands, are involved in more types of farm organizations. This association provides an interesting parallel to the attitude (expressed by some respondents, as discussed in the next chapter) that farm programs such as those offered by USDA are useful only to large operations. Women from the North Central region and the West tend to participate in more types of farm organizations, perhaps because of unmeasured regional differences in types of enterprise (although proportion of sales attibutable to crops does not have an effect significantly different from zero). Here, women do not seem to substitute for their husbands employed off the farm. While marital status per se has no direct effect, having a husband employed off the farm actually decreases the number of farm organizations to which a woman belongs, perhaps because of greater demands on the woman on the operation and in the home or perhaps because such families have a lower overall commitment to agriculture. Her own employment has no direct effect, although her education does: women with more years of education are more involved in farm organizations. Effects of education on political and organizational participation for women have been consistently found elsewhere, although not always with employment held constant. Age and number of children have no effect on organizational participation, net of other factors, but again, those who have spent more of their lives in agriculture and who have their names on deeds or rental contracts are involved in more types of agricultural organizations. The factors predicting involvement in farm organizations thus differ in important ways from the factors predicting participation in the work and decision-making of the operation, although background and legal relationship to the land are important here also.

Summary and Discussion

In this chapter, we looked in more detail at the variation in women's involvement in a range of tasks and decisions on their operations and at their involvement in agriculture outside their operations as measured by their membership in types of agricultural organizations. We simultaneously examined the effects on this participation of farm characteristics (including who else helps with the work on the farm) and of characteristics of the woman. The analysis here helps to establish what factors exert direct influence upon a woman's involvement, since it controls for other factors in looking at the influence of each variable. At the same time, the results are affected by exactly which variables we included in the analysis and how they were measured. For example, we could find different sorts of effects of age if we did not control for marital status.

In the statistical sense, we found that one of the most important factors associated with the range of tasks a woman did was her age, perhaps representing physical ability. The older women were less likely to do a large proportion of tasks. But there was no indication that, net of other things, older women were less involved in a range of decision types or farm organizations. A woman's family situation affected the extent of her involvement in tasks and decisions as well. Unmarried women were involved in a proportionately larger range of tasks and decisions, as were women whose husbands were employed off the farm. Having children under the age of six decreased the range of tasks and decisions a woman contributed to. However, women did not seem to be less involved on the operation when there were other people in the family (or hired hands) who worked on the operation. In contrast with what we found in the last chapter, net of the other factors, a woman's own employment off the farm decreased her involvement in tasks and decision-making, but it did not affect her memberships in agricultural organizations. Also, controlling for other variables, the more educated farm women were more likely to be involved in their operations and to belong to farm organizations, as were those with their names on deeds or rental contracts for the land they worked.

Those who spent more of their lives on farms were also more likely to be involved at least occasionally in a range of farm tasks and to belong to more types of agricultural organizations. There were also regional variations (with women from the South lower on each dependent variable, even controlling for employment, etc.) and by type of operation.

Thus, a woman's current situation both in the home and in the labor market, and her past experience (as well as some of the characteristics of her operation) influence separately the range of tasks and decisions with which she is involved and the number of types of farm organizations to which she belongs. There is some evidence of complementarity between the woman and her husband with respect to their work on the farm and off, as well as of an impact of lifecycle stage (from the effects of age and number of children). The woman's part in the operation may thus change over her life, although, as we have emphasized, we do not have the longitudinal data needed to test this directly. Nevertheless, the significance of the age effect upon farm work suggests that the future role of women in their operations as well as their current contributions must be kept in mind when trying to understand and respond to the needs of farm women. Much of the variation in the dependent variables was not explained by the set of independent variables, which may suggest that such things as the preference of a given woman or more details about the operation are important as well.

Notes for Chapter 3

[1] With this technique, we can see how a particular variable, such as age, affects some aspect of women's work and attitudes, controlling for a number of other characteristics such as number of children, the number of other workers on the operation, the woman's off-farm employment, and the type of operation). That is, we can see how women's task involvement, say, would vary with age (does it go up, down, or what?) if they were all average with respect to presence of children and so on. Although there is a large literature on women's labor force participation and occupational achievements using multivariate techniques such as regression, there is almost no research that uses a multivariate approach to study women's involvement in agriculture. One exception is Wilkening and Ahrens (1979).

[2] One problem with measures of farm characteristics--total farm value, net farm income, and, to a lesser extent, percent of sales from crops--is that considerable numbers of our sample did not know these figures: 625 women said that they did not know the net income of their operation, 833 said that they did not know the total value, and 242 did not report percent of sales from crops.

One way to proceed would be to use information only from women who did report the value and net income of their operation. However, these women differ from other women--they are younger, have more education, are from farms with high net incomes and are somewhat more involved in their operation and in agricultural organizations. To get around this problem we could include as one set of variables whether or not the woman could report any value for these two questions. Then for those who could, we would include the exact reported value. Technically, this involved creating a variable of "don't know" for both total value and net income, that would be equal to 1 if the woman could report the value and 0 otherwise, and an interaction term with "don't know" value, that would give the reported value of total farm value or net farm income when a person did report some figure and would give 0 otherwise. There is a conceptual problem with these variables. The extent to which a woman knows about the value of the operation could represent her motivation to follow the more abstract progress of the farm, as compared with the concrete reality of tasks, but could also have been caused by her involvement in the operation, especially the bookkeeping, rather than causing this involvement. There would thus be a simultaneity bias in the equations using knowledge of farm total value, net income, and percent of sales from crops as variables.

There are two alternatives that preserve the representativeness of the subsample used for the multiple regressions while avoiding this simultaneity problem. One is to use as input to the regression the correlations between pairs of variables, using all the cases with data present on any two variables. Although this uses all the data available, it can lead to problems also, since it means that the effects of the variables are all potentially based on different subsamples of the data, subsamples that might differ in nature of their relationships among variables. The second alternative is to replace "don't know" responses with the mean calculated for those who gave a response. The problem with this approach is that it attenuates the variance in the variables so treated and could reduce effects of the modified variables. All these alternatives--deletion of all cases with data missing on operation characteristics, inclusion of "don't know" responses, pairwise deletion, and replacement with means--were tried. The results were remarkably similar across alternatives, although, predictably, the results with deletion of all cases with missing data differed the most from other results. The tables presented here and in Appendix B report the most conservative results, from analyses where missing data on the operation characteristics of total value, net income, and percent of sales coming from crops were replaced with their means, and cases with missing values on any other variable included in a particular regression equation were deleted.

One other problem with the income data should be mentioned, since it affects our estimates of the mean and the standard deviation of net farm income in this and subsequent analyses. In response to our net farm income question, six percent of the women respondents answered that their operations had sustained a net loss in 1979 (the comparable figure for males was 8 percent). Of this number, only a very few could specify the dollar amounts of the net loss. Rather than code the remainder as "don't know's", we have assigned losses to the zero value (break even point) on the net income scale. This decision further reduces the loss of information due to missing data, but introduces an unknown amount of upward bias in our estimates of net farm income.

The reader should note that the net income estimates presented in Table 3.1 are somewhat higher than those reflected in other sources. Although the discrepancy is due in part to the manipulations discussed here (mean substitution and classification of unspecified losses at the zero point), we doubt that these transformations affect the values of the estimates nearly as much as the decision to use a nearly two year old sampling frame without updating for new entrants into agriculture. As we pointed out in Chapter 1 above, the sample for this study permits generalization only to the universe of farm operations which were in business in 1978 and were still operating in 1980. Since operations which had ceased to function since 1978 (through death, retirement, etc.) and new entrants since 1978 were excluded as ineligible, the effective universe is restricted to a set of relatively stable and probably more successful operations compared to the universe of all farm operations in 1980.

[3] The unstandardized coefficients tell one how much a change of one unit of the independent (explanatory) variable changes the dependent (explained) variable--controlling for the values of all other variables in the equation. For example, in the regression on percent of tasks done occasionally, an increase of one child under six leads to a decrease of almost 4 percent in the percent of tasks done. The standardized coefficients tell one the order of importance of the variables: ignoring the sign of the coefficient, the larger the standardized coefficient relative to the other standardized coefficients, the more important its

variable is. For example, again in the equation for percent of tasks done occasionally, age has the largest standarized coefficient--of .26--and could be considered the most important variable in explaining the dependent variable. R^2 gives the percent of variance in the dependent variable explained by all the independent variables together. It can range from 0 to 1. All of the R^2's in this table are significantly greater than 0. That is, at least some of the variance in the different outcomes are explained by the independent variables.

All of the variables were tested for nonlinear association with the various dependent variables. Education and region most consistently showed nonlinear relationships. Both are treated here as categorical variables. Age also showed nonlinear relationships with some of the dependent variables. Howevever, it was thought that controlling for the presence of young children would remove this. The intercorrelations among variables were examined to see whether there was any multicollinearity, that is, pairs of independent variables that were so closely associated that they would not really make independent contributions to explaining the various dependent variables. In general, the independent variables do not have high intercorrelations. The highest is between age and number of children under six--with a correlation of about .47. This value is well below the level at which multicollinearity is thought to be a problem.

CHAPTER 4

FACING THE BUREAUCRACY: FARM WOMEN AND THE U.S. DEPARTMENT OF AGRICULTURE

Calvin Jones

In the preceding chapters, we have established that most farm women are involved with one or more aspects of production, marketing, or the overall management of their operations. We have noted that more than half of our respondents perceive themselves to be one of the principal operators for their farms or ranches, and that the majority of women feel that they could probably run their operations without their husbands. Nearly 80 percent of the women we spoke with are part owners of the land they work; equal numbers are involved with the financial management of their enterprises. Although the nature and magnitude of women's contributions may vary considerably across operations, little doubt can remain that farm women play a vital role in promoting and sustaining the productivity of American agriculture.

The majority of women, then, are essential partners with their husbands in the internal workings of their farms, ranches, or other agricultural businesses. Our purpose in this chapter is to examine whether this partnership is also reflected in the external relationships between farm operations and other social, political, and economic institutions, especially between the operations and the U.S. Department of Agriculture. In an increasingly complex, rapidly changing agricultural economy, farm operators must devote ever more time and energy to coping with the market environment and the web of government. With its multibillion dollar budget and an immense variety of economic, technical, and educational programs, no single environmental factor is of greater potential importance to farm families than USDA. Whether through information distribution or through direct intervention in commodity and credit markets, the impact of the Agency is so great that producers can no longer afford to tolerate restrictions in any form on access to federal benefits or services.

Little systematic data--and literally no national survey data--have been collected on women's involvement with USDA. Thus, policymakers found themselves without the necessary information to respond to questions raised by individuals and groups about farm women's access to federal agricultural programs. Consequently, one of the major goals of this study was to gather information about farm women's experiences with large-scale, longstanding farm programs, and about their perceptions of those experiences. The absence of even the most rudimentary data on women's program involvement forced us to concentrate on the most basic levels of experience: awareness of and knowledge about programs, participation in the application process, the ultimate outcomes of applications submitted, and business interactions with agency program personnel.

Important to our conclusions was the early decision to take the most straightforward approach possible to the measurement of women's evaluations of their experiences with USDA programs and employees. Although program officials did not always welcome the inclusion of direct questions about unfair or unsatisfactory treatment, they readily accepted the importance of clear, unambiguous measurements over their concerns about the possible implications of critical or negative findings. Within the limits imposed by the exploratory nature of the research and by sound methodology, the program involvement section of the interview schedule sought to uncover any evidence that farm women feel deprived either of access to or of fair treatment in their dealings with major federal farm programs. As we show below, the findings on this issue could not be more clear.

Two major alternatives for investigating women's involvement in USDA programs were identified as the study design was developed. The first would rely on open-ended questions to discover which agency programs each respondent had participated in or applied to in the recent past; followup questions would then probe the nature of those experiences. The second alternative would focus on a small number of selected USDA programs, and would seek experiential data from all respondents with respect to the same programs. Although each approach offered distinct advantages, we chose the second, program-specific approach because it seemed to provide a more straightforward basis for making comparisions among women in important analytical categories (e.g., level of farm involvement, age group). Moreover, we felt that comparisons of men's and women's experiences would be difficult, if not impossible, to interpret if the underlying referents (programs) were different for the two groups. Protecting the clarity and validity of the male-female comparisons is especially important in this analysis, given the absence of any other meaningful baseline against which to evaluate farm women's experiences and perceptions.

However, the use of a program-specific approach carries substantial risks associated with the selection of the programs for study. To provide an adequate data base in the sample, the programs had to be widely available and used by a sufficiently large proportion of farm operations. Further, the value of the benefits or services offered to participants had to be attractive enough that significant inequalities in distribution or access would be worth knowing about. Finally, the range of programs investigated had to be varied enough to allow for the possibility that any differences in male-female involvement might themselves vary according to the characteristics of the programs (e.g., type of benefit offered, application procedures, administering agency). We selected four programs to meet these criteria.

The Commodity Loan Program (also known as the Price Support Program) is operated by the Agricultural Stabilization and Conservation Service (ASCS). The principal benefits from this program are loans to producers of certain commodities (wheat, corn, sorghum, barley, soybeans, rice, and cotton) against future sales, using products in storage as collateral. Loan rates and other program features, such as set-aside requirements and various price parameters, are subject to revision each year. To participate in ASCS programs, an operation must be registered with its county ASCS office. In particular, to become an applicant or coapplicant for the Commodity Loan Program, one's name must appear in the ASCS file for the operation, as owner, operator, or producer for that enterprise.

The Conservation Operations program is administered by USDA's Soil Conservation Service through locally based offices in Soil Conservation Districts (which are legal subdivisions of state governments, not parts of USDA). The program provides technical assistance in the design and implementation of sound conservation practices: it does not offer direct monetary aid. (In certain regions, additional SCS programs may offer cost-sharing benefits to support certain conservation measures, but these are not generally available.) Program participants are usually asked to become official cooperators in District conservation programs.

Also included were a series of loan programs operated by the Farmers' Home Administration (FmHA), including Farm Ownership and Farm Operating Loans, Rural Housing Loans, Disaster Loans, and Economic Emergency Loans. FmHA programs provide financing and technical assistance to persons who operate units that can be managed by a family. In 1979, FmHA loans to farm families amounted to nearly 8 billion dollars. Loan applications and other services are handled by FmHA agents in local county offices.

Finally, we included a broad range of educational programs, advisory services, and community activities operated or sponsored by the Cooperative Extension Service. Extension Service programs generally develop from cooperative efforts between county agents and other experts affiliated with state land-grant colleges on the one hand and committees of local residents who volunteer or are elected by their peers on the other. Of interest in this study were formal and informal educational programs, 4-H activities, homemaker associations, and a number of advice and information services operated or coordinated by the Extension Service. Because it seemed possible that women's contact with USDA was most likely to have occurred through participation in the more "traditional" women's activities offered by the Extension Service (e.g., homemaker clubs, food and nutrition courses, 4-H programs), data on these experiences were of special interest.

We explored women's experiences with these agencies in two major contexts. The first is the application process--the formal means by which individuals pursue benefits or services provided under the first three programs listed above—including the final outcomes for any applications submitted. (Educational programs of the Extension Service are not generally distributed on the basis of applications, so this context was treated simply in terms of respondents' participation in a variety of educationally oriented activities.) The second context is the more general one of business contacts with personnel in locally based offices of the four USDA agencies. In both contexts, we were concerned with answering the same two broad questions: What is the extent and nature of women's involvement in these activities? How do they evaluate the experiences they have had? The data used to address these questions are the responses to the items in Part III of both questionnaire versions (included in Appendix C).

Program Applications

We turn first to the ASCS, SCS, and FmHA programs, for which formal applications are required. Table 4.1 displays a detailed breakdown of applications to all three programs from both male and female respondents. We found that very few women reported involvement as sole or joint applicants to the programs, with proportions of 7 percent for the Commodity Loan program, 8 percent for the Conservation Operations program, and 10 percent for FmHA loans. The corresponding percentages for men were higher, but not overwhelmingly so: 20 percent, 22 percent, and 13 percent for ASCS, SCS, and FmHA programs respectively. Still, the differences between men and women in the application process are large enough to deserve further analysis. In addition, the data provide considerable detail on why participation rates for both men and women are relatively low.

We can identify two major types of nonparticipants in program applications: those who have never heard about the programs or their provisions and thus are unaware of the opportunity to apply, and those who are familiar with the programs but are not eligible or choose not to apply. Perhaps the largest male-female difference to be found in our program experience measures is the extent to which women are unaware that these programs exist. Over one-third (35 to 37 percent) of the women had not heard of the ASCS and SCS programs, and 26 percent said they had never heard anything about loans from the Farmers' Home Administration. For men, the comparable figures were 14 percent, 18 percent, and 12 percent respectively (see Table 4.1).

Despite what these relationships might show, it is by no means clear that women's lack of information about programs seriously interferes with program applications by their operations. The basis for this suggestion can also be found in Table 4.1. Note that almost equal proportions of men and women reported that their operations had filed applications for each program, regardless of whether their own names appeared on the application (about 20 percent for ASCS and SCS, about 14 percent for FmHA). The sequence of questions about each program began with an item asking whether the respondent had ever heard anything about the program. If the respondent answered in the negative, there was no point in asking further questions about experiences with the program, so the remainder of the sequence was skipped. We had hypothesized initially that on some operations men would handle program applications alone and their wives would know little or nothing about program provisions and procedures. However, if this situation were very common, men should have been considerably more likely than women

TABLE 4.1

INVOLVEMENT IN APPLICATIONS FOR THREE USDA PROGRAMS

(Percent)

Response	Agency					
	ASCS		SCS		FmHA	
	Percent of All Respondents	Percent of Those in Subgroup	Percent of All Respondents	Percent of Those in Subgroup	Percent of All Respondents	Percent of Those in Subgroup
	Female Response					
1. R's operation had applied	20	100	18	100	14	100
a. Women sole applicants	1	5	1	7	1	4
b. Women joint applicants	6	32	7	38	9	68
c. Women not named on application	13	63	10	55	4	28
2. R's operation had not applied	38	100	41	100	59	100
a. Not eligible for program	7	17	2	5	5	8
b. No need for program benefits	18	49	30	72	44	75
c. Other reason (recorded verbatim)	8	20	6	14	8	13
d. R does not know reason	5	14	4	9	2	4
3. R does not know if operation applied	7	--	4	--	1	--
4. R had never heard about program[a]	35	--	37	--	26	--
Total	100		100		100	
N	(2,509)		(2,509)		(2,509)	

TABLE 4.1--Continued

Response	Agency					
	ASCS		SCS		FmHA	
	Percent of All Respondents	Percent of Those in Subgroup	Percent of All Respondents	Percent of Those in Subgroup	Percent of All Respondents	Percent of Those in Subgroup
	Male Response					
1. R's operation had applied	21	100	22	100	13	100
a. Men sole applicants	14	67	17	77	7	54
b. Men joint applicants	6	29	5	23	6	46
c. Men not named on application....	1	4	--	--	--	--
2. R's operation had not applied	64	100	60	100	75	100
a. Not eligible for program	12	19	2	4	9	12
b. No need for program benefits ...	29	46	44	73	53	71
c. Other reason (recorded verbatim)	22	33	13	22	12	16
d. R does not know reason	2	2	1	1	1	1
3. R does not know if operation applied	1	--	--	--	--	--
4. R had never heard about program[a] ..	14	--	18	--	12	--
Total	100	--	100	--	100	--
N	(569)	--	(569)	--	(569)	--

[a] Respondents who had never heard about a program were not asked whether their operations had applied.

TABLE 4.2

DISTRIBUTION OF PROGRAM AWARENESS BETWEEN HUSBANDS AND WIVES

(Percent)

Heard about Program	Program		
	Price Support	Conservation Operation	FmHA Loans
Both husband and wife	57	56	67
Wife only	7	6	6
Husband only	30	29	22
Neither husband nor wife	6	9	5
Total	100	100	100
(N)	(497)	(497)	(497)

to report applications by their operations. Only in the case of the Conservation Operations programs were men more likely to report that the operation had applied for technical assistance, and the difference is only 4 percentage points.

We can explore these issues more directly with the use of data from the subset of 497 operations in which separate interviews were conducted with both husbands and wives. The first question concerns the distribution of information within the households. We see in Table 4.2 that in most cases (57 to 67 percent) both husbands and wives have heard about each program; in an additional 22 to 30 percent, husbands (but not wives) are aware of the programs. In 6 to 7 percent of households, only wives reported having heard about the programs. The fact that substantial proportions of women (from 27 to 38 percent) are unfamiliar with these programs is worth noting for its own sake. At the same

TABLE 4.3

PROGRAM AWARENESS AMONG HUSBANDS OF UNINFORMED WIVES

(Percent)

Program	Husband Has Heard About Program	N[a]
Price support	83	178
Conservation operations	76	188
FmHA loans	81	130

[a] Number of cases in each row is restricted to operations in the 497-case household sample in which wives reported that they had never heard of the specified program.

time, however, it should be clear that on only a small proportion of operations did both husbands and wives report never having heard about them. Thus, while sizable proportions of our respondents became aware of these three programs as a result of our survey questions, only a small proportion of operations (from 5 to 9 percent) experienced a net gain in information beyond that already possessed by either the husband or wife.

Looking at the data in a slightly different way, we can confirm our suspicion that women who are not aware of the three programs are likely to be married to men who are aware of them. In each row of Table 4.3 we include only those operations on which the wife reported she had never heard about the specified program. In each case, the overwhelming majority of husbands (from 76 to 83 percent) reported that they were aware of the programs. Futhermore, among operations where the wife is not aware of a program, most (from 75 to 84 percent) have not filed applications or requests within the past two or three years, according to the husbands' reports. Conversely, among operations where the husband reported that an application or request was submitted, the majority of wives (ranging from 69 percent for the SCS program up to 89 percent for the FmHA programs) said that they were aware of those programs.

It seems likely, therefore, that an important reason many women have never heard about particular programs is that the programs are perceived by their husbands to be of little use or value to their operations, and the investment of energy to learn about them has little expected payoff. It is not our purpose to judge whether or not this is a desirable state of affairs. Our point is that if an operation files a program application, the farm woman will be very likely to know about it (if not always to participate as an applicant). In the great majority of cases, a woman who indicated no awareness of a program will be living on a farm that has not applied.

This is hardly a surprising discovery given our findings concerning the range of farm women's involvement in work and decision-making for their operations. Since most women are regularly involved in bookkeeping and financial management, it seems improbable that they would be ignorant of economic programs, such as the Price Support or FmHA loan programs, to which their operations had applied. Moreover, since the majority of farm women reported that they handle "farm errands," it is very likely that they would be involved in the logistics of filing program applications (gathering pertinent forms and information, obtaining notarizations, hand-carrying documents, etc.), even if they are not named as sole or joint applicants. The data on organizational memberships also showed that nearly half of our sample of farm women are members of networks of other people like themselves, again substantially reducing the likelihood that they would be wholly uninformed about programs of potential interest or benefit to their farms.

Of course, it may well be that if more farm women were aware of the existence and provisions of particular federal programs then more operations would file applications to participate. In other words, it is possible that for some farms access to programs is impeded because one family member lacks the basic information to judge whether program participation might be desirable. While this possibility cannot be entirely ruled out, it should be kept in mind that the extent of unfamiliarity with programs in our sample is substantially lower among men than among women. Consider first Table 4.4. Only two women in five reported that they were either "very familiar" or "somewhat familiar" with the three programs. Very small proportions (from 6 to 12 percent) claimed to be "very familiar" with program provisions and procedures. The remainder, about 60 percent of the women, were not at all familiar with the programs, including substantial proportions (from 26 to 37 percent) who had never heard about the programs. In contrast, between 19 and 25 percent of the men surveyed reported that they were "very familiar" with each of the programs. Nearly two-thirds of the men were at least "somewhat familiar" with the Price Support and Conservation Operations programs, and over half (56 percent) were familiar with FmHA loan programs. Relatively few men (12 to 18 percent) reported that they had never heard of the specified programs. At first glance, the much greater occurence of program familiarity among men might suggest

TABLE 4.4

FAMILIARITY WITH PRICE SUPPORT, CONSERVATION OPERATIONS, AND FmHA LOAN PROGRAMS

(Percent)

Response	Price Support	Conservation Operations	FmHA Loans
Women			
Very familiar	6	9	12
Somewhat familiar	33	31	30
Not familiar	26	23	32
Never heard about program	35	37	26
Total	100	100	100
N	(2,509)	(2,509)	(2,509)
Men:			
Very familiar	24	25	19
Somewhat familiar	40	39	37
Not familiar	22	18	32
Never heard about program	14	18	12
Total	100	100	100
N	(569)	(569)	(569)

TABLE 4.5

FAMILIARITY OF HOUSEHOLD MEMBERS WITH PROVISIONS OF USDA PROGRAMS
(Percent)

Report being "Very" or "Somewhat Familiar"	Program		
	Price Support	Conservation Operation	FmHA Loans
Both husbands and wives	30	29	33
Wives only	8	10	11
Husbands only	38	36	26
Neither husbands nor wives[a]..	24	25	30
Total	100	100	100
(N)	(497)	(497)	(497)

[a] Includes households in which neither husbands nor wives have heard anything about each program (see Table 4.).

that farm women are comparatively deprived of information crucial to the pursuit of program benefits.

A sharply different impression emerges from our analysis of data from married couples. We see in Table 4.5 that in roughly three households in ten both husbands and wives are familiar with each program. In a small proportion of cases, the wife was the only household member to report program familiarity. More important, however, is the fact that husbands reported program familiarity (even though the wives did not) in from 26 to 38 percent of the farm households. In only 24 to 30 percent of the enterprises did neither of the marriage partners claim to be familiar with the specified programs.

These data also show that, for two of the three programs, most women who are themselves unfamiliar with the program provisions are married to husbands who _are_ familiar with them. For example, in the case of the Price Support Program, in 62 percent of the enterprises, wives reported that they were not at all familiar with program provisions or application procedures (38 percent where husbands only were familiar plus 24 percent where neither partner was familiar). However, in 61 percent of these cases (38 percent ÷ 62 percent), husbands reported that they were at least "somewhat familiar" with the workings of the program. Similarly, husbands claimed familiarity with the Conservation Operations and FmHA Loan programs in 59 percent and 46 percent respectively of the households where wives reported that they were not familiar with these programs.

Thus, in most cases, at least one family member is likely to have enough information to consider the potential gains from participation. Under these circumstances, we expect that any increase in the probability that an operation would apply to a program when a second family member becomes aware of that program is slight. We return to this issue in our discussion of the reasons that farm operations have not filed program applications.

A third type of nonapplicant is one whose operation applied, but who is not included as a named party on the application form. We see in Table 4.1 that males are involved in almost all cases when their operations file applications. For women, involvement rates are more variable. Women were involved on 37 percent of the operations applying for Commodity Loans, on 45 percent of those applying for technical conservation assistance, and on fully 72 percent of the operations applying for FmHA loans.

Although our survey collected no data that directly address the question of why women might be involved in some applications but not others, we can offer a few speculative interpretations. Perhaps the most obvious determinant of women's involvement as applicants concerns the scope and duration of the program--and, as a consequence, the formal and legal requirements of the application process. FmHA loans, for example, almost always involve larger dollar amounts and longer time periods than Commodity loans, and usually require the commitment of collateral owned jointly by husbands and wives. (Recall from Chapter 2 that nearly 90 percent of our sample of women whose operations included family-owned land were named as co-owners on deeds or titles.) Commodity loans tend to be made for much shorter terms, and the application procedures require that any named applicants be registered in their operations' files at local ASCS offices. Table 4.6 shows that women are less likely than men to know whether their operations are on file with ASCS, and if on file, much less likely to be listed as owners, operators or producers for their enterprise.

The characteristics of the Conservation Operations program fall somewhere between those of the loan programs. While there is no requirement that named applicants be preregistered with the Soil Conservation office, the technical nature of the program tends to encourage formal application by farm family members knowledgeable about the technical production practices and problems faced by the operation. To the extent that women have less involvement in these aspects of running their operations than they have in the financial, marketing, and general management tasks, they may be less likely to be included as named applicants to this program than for FmHA loans. However, it may be that women are somewhat more likely to participate as formal applicants because of the fact that SCS assistance is likely to involve a continuing relationship

TABLE 4.6

REGISTRATION OF RESPONDENT'S OPERATION AT ASCS OFFICE

(Percent)

Outcome	Women	Men
A. Is farm/ranch on file at local ASCS office?		
Yes	76	81
No	7	12
Don't know	17	7
Total	100	100
N	(2,504)	(568)
B. If "yes" to A: Is R's own name listed as owner, operator, or producer?		
Yes	45	94
No	35	4
Don't know	20	2
Total	100	100
N	(1,897)	(463)
C. If "no" or "don't know" to B: Has R ever tried to have own name listed in ASCS file?		
Yes	1	12
No	99	88
Total	100	100
N	(1,619)	(130)

TABLE 4.7

WOMEN'S INVOLVEMENT IN USDA PROGRAM APPLICATIONS
(Percent)

Level of Involvement	Agency/Program		
	ASCS	SCS	FmHA
Name on application form	37	45	72
Business contact with agency personnel, but not named on application	14	11	5
Neither on application nor business contact	49	44	23
Total	100	100	100
N[a]	(510)	(445)	(337)

[a] Note reduced N's. Data in each column are based only on respondents who reported that their operations had filed an application for the specified program.

over several years, which may have a broad impact on management activities beyond technical production.

Of course, the fact that women are not identified on application forms does not necessarily mean that they are not personally involved in the application process. They might, for example, perform a crucial liaison function between the operation and the administering agency (obtaining necessary forms and instructions, gathering supplementary materials, clarifying procedures and following up applications with program personnel, etc.). We can examine this possibility using data from survey items asking if respondents had any business contacts with personnel from the program agencies. Table 4.7 presents data on women's involvement levels among those who reported that their operations had applied for each of the three programs. These data suggest that the "liaison only" role is not a common one. Of the women named as applicants, 50 to 60 percent also reported business contacts with program personnel; only between 5 and 14 percent of the women served the liaison function alone. The remaining women may still have made substantial contributions to the submission of program applications for their operations. If so, their input, however valuable, is less visible than that of their counterparts who appear on applications or work with staff members of program offices.

As we pointed out above, the most common reason that women were not involved in the three programs under study was simply that their operations had not filed applications. In such cases, we were interested in learning whether the decision not to apply might have been influenced by the women's anticipation of biased, unfair, or substandard treatment of their applications. A followup question was designed to ascertain the main reason that applications had not been filed. Questionnaire pretest results suggested that ineligibility and lack of need were the two most common reasons for not applying, so these alternatives were incorporated into the wording of the followup question. Table 4.1 displays the percentages who cited the various reasons for not applying.

Overall, 38 percent of the women respondents told us that their operations had not applied for the Price Support program. An additional 35 percent reported that they had never heard about the program and were not asked any further questions. Using our data file for married couples, we found that 87 percent of the husbands of women who had not heard of the Price Support program indicated that their operations had not participated in the last two or three years. Isolating the subgroup (38 percent) of female respondents who said explicitly that their farms had not applied, we see that 49 percent said that they did not need the benefits, and 17 percent said that their operations were not eligible for the program. In addition, 14 percent said they did not know the reason, and 20 percent specified a reason other than ineligibility or lack of need (which interviewers recorded verbatim). Examining the equivalent subgroup of non-applicants among males, we find that the distribution of reasons for not applying is nearly identical, except that fewer men (about 2 percent) did not know the reason, and correspondingly more men (33 percent of the subgroup) gave other reasons for not applying (Table 4.1).

Of the 193 female respondents who offered other reasons, the majority fit into two broad categories--those who thought their operations were too small to make program participation worthwhile, and those who had political or philosophical objections to all or part of the program. For the former, the expected program benefits were thought not to be worth the effort required to learn and follow procedures. As one Texas farm woman put it, "We have such small acreage it does not do any good. We're better off not to sign up and have to follow the rules." A woman operator from Wisconsin put it more bluntly, "There's just too much red tape." The latter group included those who were opposed to government intervention in the agricultural marketplace or opposed to restrictions sometimes imposed on participants (e.g., planting within Normal Crop Acreage), or who simply did not want to sacrifice any decision-making independence to obtain program benefits. A typical explanation was given by a Georgia woman who operates her own farm: "We just didn't do it. We kind of make the farm stand on its own two feet." A farm wife from Kansas stated, "We feel it's like a welfare program." A third, from Illinois, explained, "Their regulations are just too restrictive. They require too many papers to verify too many things. They want to know your life history and they want you to verify it!" Of the nearly 200 responses by women, not one made even an oblique reference to an expectation of receiving biased treatment as a female applicant. About the closest one gets to an attribution of bias in the program or on the part of officials is the feeling, expressed by relatively few women, that the program is for only the large operations, that small-scale farmers are of no interest to program agents. "I think you have to be a big operator to participate," said an Iowa farm woman, "I don't think it's equalized quite right." Another, from Ohio, claimed, "It's a biased program and not good for all people. It gives no help to the small farmer; the bank is more fair." And from an Illinois woman: "I'm dissatisfied with government. I wish they would cooperate with farmers. My husband also feels that government should stay out. Great big operators get money and small farmers get little or nothing."

Results from questions on the Conservation Operations program were similar: 42 percent of the women reported that their operations had not requested assistance, and an additional 36 percent had not heard anything about the Soil Conservation Service program. Again, responses from husbands in the household data file indicated that 81 percent of the wives who had not heard of the program lived on operations that had not applied. Of the subgroup (43 percent) who said they had not applied, 72 percent claimed they did not need the service, 5 percent thought they were ineligible, 9 percent did not know the reason for not applying, and 14 percent offered a specific other reason for not requesting assistance. Again, the distributions within the subgroup of male non-applicants were very similar, except that only 1 percent did not know the reason for not applying, and 22 percent offered other reasons.

One hundred forty-two specified other reasons for not applying were recorded verbatim. Explanations given in this case were considerably more varied than those given for the Commodity Loan Program. Again, many respondents felt their operations were too small for them to bother with highly technical conservation practices, and several others indicated unwillingness to become involved in any government program, especially one that entailed any loss of autonomy to program officials. Smaller numbers specified that they were not sufficiently familiar with what SCS programs had to offer. Others reported that they could not afford to support the required practices on their operations. A handful of respondents indicated they had not requested assistance because they did not think the program was well run. For example, "I don't really approve of their programs. They do everything by the book" said a dairy farm woman from upstate New York. Finally, perhaps the most often heard response is typified by an Arizona farm woman who stated, "I don't think it's necessary to ask the government for assistance when you can do it on your own." However, just as for the previous item on the ASCS program, not one woman suggested that her operation had not applied because of an anticipation of unfair treatment of women, or of any personal bias for that matter. By way of contrast with the previous question, there were no comments to the effect that the program was designed only for larger farms or that program officials were not interested in small-scale operators.

As stated above, only 14 percent of respondents reported that their operations had applied for any of the FmHA loan programs during the past two or three years. About one-quarter of the women (26 percent) said they had not heard about these programs before. In the household file, nearly all the husbands (94 percent) of women who had not heard of the programs indicated that no applications were filed. An additional 59 percent of the women said explicitly that their operations had not applied. Within this latter group, 75 percent explained that they had no need for FmHA loans, and an additional 8 percent felt they were not eligible for such loans; 4 percent did not know the reason and 8 percent (200 respondents) reported other reasons for not applying, besides eligibility or need. (The percentages for men were about the same.)

Again, other reasons for not applying were quite varied. Most were statements of personal financial policies; many of the women explained that they and their husbands simply did not believe in getting into debt. The content of many comments suggested that this attitude did not always coincide with the absence of need for a loan. For example, an Oregon woman explained, "We could probably get by without it. If you could, why apply for a loan? Do you see my point? We get by without, even though we might need it." Another, from Wisconsin, appeared to represent many others in saying, "We wouldn't consider [FmHA loans]. Loans have to be paid back--you just get in a hole."

Many women indicated that they had other sources of credit, often specifying that they preferred to deal with those sources rather than FmHA. Said one Kansas woman, "We usually go through another channel. We do not use government programs, we stay away from them." Another, from Tennessee replied, "We obtain our funds through the Federal Land Bank and our Production Credit Association."

As in previous items, several respondents said that they avoided government programs because of the restrictions or anticipated interference with their independence as operators. A New Mexico farm woman explained, "Sometimes they don't accept your plans. They say you must plan in advance, but we must be flexible as farmers." A Nevada woman complained, "Our farm is already financed through them on operating loans. They tie you up too much! . . . Other places are more lenient, like the P.C.A. [Production Credit Association]." And an Ohio woman replied, "We're not too happy with them. Their management programs are in conjuction with modern-day technology--not in keeping with our personal farming goals and techniques."

Not one of the 200 verbatim comments suggested that application decisions for FmHA loans were based on expectations that women would be treated unfairly. We would emphasize that these findings (concerning all three program agencies discussed so far) do not by themselves demonstrate that such concerns and expectations are nonexistent. Our question sought only the main reason for not applying. We feel, however, that these results suggest that any women who have such concerns judge them to be less important than other reasons--such as opposition to government intervention in farming, preference for alternative sources for services, or a belief that potential benefits are not worth the effort--for not applying for government programs. If expectations of discriminatory treatment were a major issue in the minds of farm women it seems likely that they would have been expressed in response to these questions. The detection and measurement of any such attitudes will require considerably greater probing than was possible in this study.

Program Outcomes

Respondents who reported that their farms had applied for ASCS,

SCS, or FmHA program benefits were asked about the results for those applications. (For specific item wording, see either questionnaire version in Appendix C.) Of the 500 or so operations that had applied to the Price Support program, 70 percent of the women respondents said that they had ultimately received a loan or other payments under the program, 18 percent said they had not, and 11 percent said they could not recall the outcome (see Table 4.8-A). Percentages for male respondents were similar, with 80 percent reporting they had received a loan and 20 percent reporting they had not. Of those who reported negative outcomes, only 19 percent of the women (24 percent of the men) said that they had not met the requirements of the program, 43 percent of the women (but only 24 percent of the men) reported that they ultimately did not want the program loan, and 38 percent of the women (52 percent of the men) suggested that there was some other reasons why they did not receive the loan (reasons not explored further; see Table 4.8-B).

Respondents were then asked whether they felt that their applications had been treated fairly or unfairly. Fully 87 percent of the women (91 percent of the men) indicated that they had been treated fairly, while 5 percent (9 percent of men) reported unfair treatment, and another 8 percent said they were not sure. Respondents who reported unfair treatment (or who were not sure) were probed further to explore the nature of the problem, and all problem descriptions were recorded verbatim. In this case, however, the number of reports is simply too few (49 women and only 11 men) and the variety of responses too great to allow a meaningful analysis of these problems. About all that can be said is that most respondents who reported unfair treatment felt that they were victims of unreasonable interpretations of program regulations, such as the extent of their compliance with set-aside requirements or the proper computation of their Normal Crop Acreage. Otherwise,

TABLE 4.8

OUTCOMES FOR APPLICATIONS TO THE ASCS COMMODITY LOAN PROGRAM

(Percent)

Outcome	Women	Men
A. Did R's operation receive loan or other payments?		
Yes	70	80
No	18	20
Still pending	1	--
Don't know or recall	11	--
Total	100	100
N	(510)	(121)
B. If "no" to A: Why not?		
Did not meet program requirements	19	24
Did not want loan	43	24
Some other reason	38	52
Total	100	100
N	(90)	(24)
C. Was R's application treated fairly or unfairly?		
Fairly	87	91
Unfairly	5	9
Not sure	8	--
Total	100	100
N	(510)	(121)

no clear theme emerged from these responses. It is worth noting, however, that none of the farm women who cited fairness problems suggested that these were based in any sort of sex discrimination in program administration. In fact, when their responses did not revolve around a highly technical matter, they tended to be very general indeed, as in the case of the Oklahoma ranch woman who expressed the belief that "most farmers are treated unfairly anyway."

Outcomes for requests for assistance under the Conservation program are displayed in Tables 4.9-A through C. Of those who made requests, 86 percent of the women (and 83 percent of the men) told us that they had received assistance by the time of the interview, while 10 percent (9 percent of men) said they had not (a small number of cases were still pending). Of those who had received assistance, 89 percent of the women (92 percent of the men) reported that the technical help was instrumental in solving the operation's conservation problem, while only 5 to 6 percent indicated that it did not help (Table 4.9-B).

Again, all respondents who had submitted requests were asked whether they thought the requests had been handled fairly or unfairly. In Table 4.9-C we see that nearly 90 percent of both male and female respondents felt that they had been treated fairly. As above, those who perceived unfair treatment were asked to describe the problems they encountered, resulting in only 37 comments from women and 9 from men. No generalizations can be made on the basis of such small numbers. We can say, however, that responses to this item tended to focus on perceptions that agency personnel were not providing the level of assistance expected by respondents. In line with previous findings, there was no evidence here of complaints about poor or differential treatment of farm women.

TABLE 4.9

OUTCOMES FOR REQUESTS FOR ASSISTANCE TO THE SCS CONSERVATION OPERATIONS PROGRAM

(Percent)

Outcome	Women	Men
A. Did R's operation receive the requested assistance?		
Yes	86	83
No	10	9
Still pending	1	6
Don't know or recall	3	2
Total	100	100
N	(445)	(125)
B. If "yes" to A: Did the assistance help R to solve conservation problem?		
Yes	89	92
No	6	5
Not sure	5	3
Total	100	100
N	(382)	(104)
C. Was R's request treated fairly or unfairly?		
Fairly	89	88
Unfairly	5	6
Not sure	6	6
Total	100	100
N	(145)	(125)

This pattern of responses appeared again for the items on outcomes of applications for FmHA loans (see Table 4.10-A through C.): 81 percent of our female respondents (76 percent of the males) said they were found eligible for FmHA loans, and, among these respondents, 87 percent of the women (84 percent of men) reported that they had already received approval on the loan. On the issue of fairness, the proportions reporting that their applications had been treated unfairly were slightly higher here than for the other two programs--17 percent for women and 22 percent for men. However, because the number who submitted applications to FmHA was smaller than for the other two programs, the absolute number of fairness complaints is still very small--61 reports by women and 16 by men.

Again, the severely limited data base precludes any generalization. Only a few types of complaints were leveled at FmHA by these respondents. Nearly all remarks focused either on the length of time it took to learn of decisions regarding eligibility or loan approval, or on what respondents considered an inequitable application of program standards to their particular case. On the latter point, it is interesting to note that both large- and small-scale operators complained that those at the opposite end of the size scale were being treated better than themselves. An Indiana farm woman complained, "They're not interested in small family farms." A farm woman from Missouri reported, "They told us that they didn't have the money for the size loan we wanted, but we found out they did . . . they thought the size of our farm was too big and they didn't want to give it to us." Also worth noting is the report from a woman who operates her own farm in Wisconsin expressing dissatisfaction with the response she received from FmHA officials: "They completely ignored me. On the telephone they were very uncooperative.

TABLE 4.10

OUTCOMES FOR APPLICATIONS TO FmHA LOAN PROGRAMS

(Percent)

Outcome	Women	Men
A. Was R's operation found to be eligible?		
Yes	81	76
No	13	21
Still pending	3	3
Don't know or recall	3	--
Total	100	100
N	(337)	(73)
B. If "yes" to A: Did R finally receive loan?		
Yes	87	84
No	7	11
Still pending	5	5
Don't know or recall	1	--
Total	100	100
N	(273)	(54)
C. Was application treated fairly or unfairly?		
Fairly	78	73
Unfairly	17	22
Not sure	5	5
Total	100	100
N	(337)	(73)

They just told me that money was unavailable, and they wouldn't give me any suggestions as to where I might go otherwise." While we have no wish to minimize the importance of these incidents to the persons involved, it is clear to us that such experiences are extremely rare in the course of filing applications or requests for the programs studied.

In our discussion of program outcomes, we have emphasized the experiences and perceptions of female respondents, but the similarities in the response patterns of men and women should not be overlooked. As we stated above, in an important sense male-female comparisons provide the only legitimate measure of disparities in women's experiences and treatment. With minor exceptions, the data show that respondents of both sexes tend to encounter problems at about the same relatively low incidence rates. Although we have not quoted the responses given by males to questions about why their operations did not apply to programs or about the ways in which they were treated unfairly, a careful examination of their comments uncovered no essential differences in content between these and the comments made by women.

Our conclusions thus far are mixed. Whereas approximately equal numbers of men and women reported that their operations had submitted program applications or requests, women are considerably less likely than men to have been identified by name on those applications. Moreover, women are much less likely to be familiar with the three programs under study. Our data indicate that most women who are uninformed about the programs live on farms that do not apply to participate in them. One interpretation of this finding is that, since the operations do not apply to the programs anyway, these women have less "need to know" about them. An equally plausible interpretation, however, is that many farm operations may be missing an opportunity to apply for benefits because the operating family members do not share adequate information about program provisions and procedures. This speculation is supported by the comments of several farm women who had heard about a program but who told us that they did not know enough about the programs--the eligibility requirements, the potential benefits, the filing procedures--even to consider applying.

At the enterprise level, it is true that most women who have never heard about the programs have husbands who know something about them. Table 4.2 above showed that (depending upon the program) in only 5 to 9 percent of the households have neither husbands nor wives heard about the programs. However, Table 4.5 showed that in 24 to 30 percent of the operations in our household sample both the husbands and wives were not at all familiar with the program provisions and application procedures (including those who had not heard about a given program). The present data are not appropriate for examining whether the information held by a single family member is sufficient to support rational decisions about program participation. However, to the extent that increased participation in these programs is a goal valuable to the larger society (because the programs promote more stable commodity prices and supplies, more sound agricultural production practices, and greater competition among producers), then increased efforts to publicize these programs--especially to distribute basic information to farm women--may be desirable.

Extension Programs

Several questions in the NORC survey dealt with respondents' experiences with educational and advisory activities of the Extension

Service. A list of typical extension activities, such as classes on various agricultural topics, 4-H, distribution of nutrition information, and homemaker activities, was read to respondents, who were then asked to indicate whether they had participated in each during the last two or three years.

Response patterns for women and men are presented in Table 4.11. They should be interpreted cautiously. The percentages reporting experience with the listed activities may seem rather low, considering the pervasiveness of Extension activity in agricultural areas. The reader should keep in mind that our question was limited to experiences in the last two or three years. Respondents may have participated in some of the listed activities at an earlier time and have had no need to update the experience. Furthermore, not all of the listed activities are available in all areas at all times. The data thus document only current participation levels, and are not suitable for generalizations about long-run, overall rates. The important point is that the data do allow direct comparisons of the experiences of women and men, and these are most important for our purpose.

Several important differences are evident in the table. Looking at each column separately, we see that women were most likely to report involvement in 4-H or other youth activities (24 percent) and food and nutrition activities (20 percent), whereas men were most likely to report discussing problems of their operation with Extension agents (33 percent), getting information on other USDA programs (26 percent), and attending classes on agricultural production (26 percent). Only in the case of 4-H and youth activities and inheritance and estate-planning classes were men and women about equally likely to report

TABLE 4.11

EXPERIENCES WITH EXTENSION SERVICE EDUCATIONAL AND ADVISORY SERVICES

(Percent)

Activity	Women	Men
A. Classes or other activities on agricultural production	9	26
B. Classes or other activities on farm or ranch management	6	18
C. Homemaker clubs or other activities on family living ..	18	Not asked
D. Classes or other activities on inheritance laws or estate planning	10	12
E. Any activities on food or nutrition	20	Not asked
F. 4-H or other youth activities ..	24	22
G. Discussing specific problems of your operation with an extension agent or staff member	18	33
H. Getting information about other USDA programs or services	14	26
N	(2,509)	(569)

NOTE: Entries are percentages who reported they had personal involvement in each activity during the last two or three years.

participation. Men were nearly twice as likely as women to say they had discussed problems with an agent or gathered information about USDA programs, and they were three times as likely to report involvement in classes on production practices or farm management.

These differences are not nearly as large as those observed for program applications. Nevertheless, they are substantial, especially for those activities most directly relevant to the day-to-day management of an agricultural enterprise (items A, B, G, and H in Table 4.11). These findings offer some support to the notion that farm women tend to concentrate on Extension activities that are more traditionally defined as in the women's sphere--those related to childrearing and homemaking. The chief question is why is this so. Is it because women are somehow guided or encouraged to participate only in "acceptable" female Extension activities, or actively discouraged or prevented from having access to programs traditionally open to men?

To explore this possibility, all respondents were asked whether they had ever tried to participate in any of the listed activities but felt that they were discouraged from doing so by Extension Service personnel. The responses were unambiguous on this point: only 1 percent of the women and 2 percent of the men reported any such experience. There may be a great many individual or societal processes working to channel women's energies in the observed ways, but it appears that explicit pressures by Extension personnel cannot be counted among them.

Business Contacts with USDA Personnel

Another facet of women's interactions with USDA is the amount and character of their business contacts with agency officials. Questions were included in the NORC survey about such contacts with personnel from each of the four agencies--ASCS, SCS, FmHA, and Extension. First, we ascertained whether respondents had had business contacts with each office during the past two to three years. Respondents who reported contacts were then asked whether they were satisfied or dissatisfied with the treatment they had received on those occasions. Reports of dissatisfaction were probed for content.

Results from these items are presented in Table 4.12, with separate displays for female and male respondents. The data on business contacts generally replicate our findings concerning direct involvement in program applications. Men are two to three times more likely than women to report contacts with agency officials during the past two or three years for all agencies but the Extension Service, and even for Extension contacts men have a 10 percentage point edge. With only one exception (male contacts with ASCS personnel), respondents of either gender who report contacts are in a minority. Clearly, women are not wholly excluded from such contacts-- about one in four has had in-person business dealings with Extension office staff, and one in five has dealt with ASCS personnel. However, the prevalence of contacts is significantly lower for women than for men, raising the question whether the anticipated nature of such contacts--the treatment a woman receives from agency personnel--might affect the frequency of their occurrence.

One hypothesis is that women tend not to deal with agency officials because they anticipate rude or unpleasant treatment from them. Our data do not allow us to test this speculation directly; because of time and space considerations we were unable to explore the various reasons that women do not engage in particular activities. We can, however,

TABLE 4.12

BUSINESS CONTACTS WITH USDA PROGRAM OFFICES

(Percent)

Contact	Contact			
	ASCS	SCS	FmHA	Extension
	Women			
Reported business contact	20	14	10	26
No contact in last 2-3 years	80	86	90	74
Total	100	100	100	100
N	(2,509)	(2,509)	(2,509)	(2,509)
If R reported contact:				
Satisfied with treatment	93	95	85	95
Dissatisfied with treatment	6	3	15	4
Don't recall, not sure	1	2	--	1
Total	100	100	100	100
N	(492)	(350)	(239)	(662)
	Men			
Reported business contact	56	40	19	36
No contact in last 2-3 years	44	60	81	64
Total	100	100	100	100
N	(569)	(569)	(569)	(569)
If R reported contact:				
Satisfied with treatment	92	95	76	96
Dissatisfied with treatment	6	5	20	4
Don't recall, not sure	2	--	4	--
Total	100	100	100	100
N	(316)	(224)	(106)	(206)

examine the experiences of those women who have had business contacts to see whether, compared with men, they are more likely to have had unsatisfactory results. This data is displayed in the lower portions of both sections of Table 4.12.

Among those who reported contacts during the last two to three years, about 95 percent of men and women reported being satisfied with the treatment they received from ASCS, SCS, and Extension Service personnel. Satisfaction levels with FmHA, while still quite high, were somewhat lower. Interestingly, men were about 5 percentage points more likely than women to report dissatisfaction with treatment by FmHA personnel. To us, these findings constitute strong circumstantial evidence that women probably do not avoid business contacts with the agencies because they anticipate unfair treatment. Since so few women who have had such contacts are dissatisfied, it is difficult to see why such expectations would be sustained. It would be unwise to carry this reasoning too far, however. Negative anticipations may be easier to maintain when one has no direct experience with program officials or employees. Furthermore, our initial question on business contacts focused on the last two to three years; some respondents may have had negative experiences several years ago, and may have sought to avoid any repetition during the more recent past.

Because so few respondents reported unsatisfactory experiences, little can be said with confidence about the kinds of difficulties that tend to occur. In general, the great majority of complaints about treatment relate to the quality of the services provided (or not provided). Men and women alike mentioned such issues as the apparent incompetence of program personnel and the seemingly excessive delays or breakdowns in responsiveness (especially in the case of the Farmers' Home Administration). Of the 114 treatment complaints recorded from women respondents addressing all four agencies, only 12 comments mentioned anything that might be construed as discriminatory treatment on the basis of gender. Of the 53 complaints from men, a total of 7 mentioned poor personal treatment. Although interactions of farm women and men with USDA personnel are not friction-free, our data suggest that, in this regard, there are no major differences in the experiences of men and women.

Interestingly, one characteristic common to most of the complaints made by women was a tendency to report that "we" did not receive proper service, or that agents did not care about "our" problems, even though the questions about business contacts were phrased in terms of "you yourself." We found this usage to be quite common among farm women. It reflects a deeply ingrained sense of identity with the family unit or operation--a sense so deep that there is a plural or collective tinge even to responses about strictly personal experiences.

Involvement in Official Committees, Panels, or Advisory Boards

During the last two decades, we have seen in the wider society a steady and continuing increase in women's involvement in political and administrative institutions. It is of interest to examine the extent to which farm and ranch women have assumed leadership roles in the agricultural and rural sector. The NORC survey included three questions on involvement in official bodies such as committees, advisory boards, and panels concerned with agricultural matters at different political and geographic levels: Extension program committees; state, county, or local committees; and USDA committees or panels at the federal level. (See, for example, questions 29 through 31 in the Women's Questionnaire, Appendix C.)

TABLE 4.13

INVOLVEMENT IN OFFICIAL ADMINISTRATIVE OR POLICY-MAKING BODIES
(Percent)

Official Body on Which Rs Have Served	Women	Men
Local Exension program committee	29	23
State, county or local level committee	7	17
USDA committee, board, or panel	6	16
N	(2,509)	(569)

Table 4.13 presents the results for these items separately for women and for men. Except for Extension program committee work, women's involvement in official organizations appears to be very low--only 7 percent have served on committees or panels at the local, county, or state level, and only 6 percent have served at the federal level. In light of the decentralization of the administrative structure for governmental agricultural programs, such low participation rates might lead one to suspect the existence of some mechanism that serves to inhibit the involvement of women in these activities. One must note, though, that the participation levels for men are not a great deal higher: in absolute terms, they are only 10 percentage points more likely than women to have held administrative or policy-making positions. At the same time, given that only a small minority of our respondents reported such involvement, males in our sample are about two and one-half times more likely to have served in this capacity. The important question is whether women are underrepresented on boards and panels by their own choice or because of imposed barriers.

Our survey data do not allow us to answer the question of choice or barriers in as straightforward a way as we might like, but we can gain some insight into the issue. There is evidence that women are ready and willing to participate in political and administrative bodies more than they do. First, in contrast with findings for higher level units, more women (29 percent) than men (23 percent) have been involved in committees or groups that worked to develop or implement local Extension programs. By and large, men and women tend not to be involved in development of the same types of Extension programs, just as they do not participate to the same degree in the various Extension programs. Women are more likely to have contributed to the establishment and operation of homemaker activities, food and nutrition programs, and 4-H and youth activities, while men have tended to focus more on production and management (and, to a growing extent, marketing) programs.

A second piece of evidence is found in responses to our question about how willing men and women would be to serve on committees or run for election to an administrative or policy-making group (see Table 4.14). Of the female respondents, 4 percent indicated that they would definitely agree to do so, and 27 percent said they probably would agree. Nearly two-thirds of the women gave a negative response, with 38 percent saying probably no, and 27 percent saying they definitely would not agree. In contrast, 11 percent of the males reported that they definitely would serve or run for office (nearly three times the proportion for women), and 43 percent said they probably would agree. Relatively fewer men gave negative answers, with 28 percent and 14 percent saying they would probably not and definitely not agree.

TABLE 4.14

WILLINGNESS TO SERVE ON OFFICAL GROUPS IN THE FUTURE
(Percent)

Would R Agree to Serve?	Women	Men
Definitely yes	4	11
Probably yes	27	43
Probably no	38	28
Definitely no	27	14
Don't know	4	4
Total	100	100
N	(2,509)	(569)

In general, the proportion of women who indicated prospective willingness to take on or pursue such leadership roles is exactly equal to the proportion who served on one or more official groups in the past. For men, the percentage who are willing to serve in the future is 20 points higher than the percentage who have already held such a role. We see in Table 4.15 that the relationship between past service and willingness to serve or run for election in the future is far from perfect for both genders. Among women who have held such positions, 45 percent said they would be willing to serve again in the future and 55 percent said they would not be willing. Among women who have never been involved in official committees or groups, 25 percent indicated that they would be willing to become involved in the future.

TABLE 4.15

WILLINGNESS TO SERVE ON OFFICIAL GROUPS AND PAST LEADERSHIP EXPERIENCE

(Percent)

Served on official committee or group in the past?	Serve on official committee or group in the future? Yes	No	Total	(N)
A. Women				
Yes	45	55	100	(784)
No	25	75	100	(1,725)
B. Men				
Yes	63	37	100	(191)
No	49	51	100	(378)

Among men, nearly two thirds (63 percent) of those who have had prior experience on groups of this kind expressed interest in future involvements. Moreover, nearly half (49 percent) of the men who had never served in this capacity said they would probably or definitely agree to take on such a role if asked. Thus, whether or not they have held leadership positions in the past, substantially higher proportions of men are willing to accept or run for election to these positions. Insofar as there is competition for places on committees, task forces and panels, there are likely to be more men than women available and therefore competing for existing positions. This is entirely apart from whether there are any exceptional barriers to participation by women. Determining the existence of such barriers will require more detailed investigation and analysis than was possible in this study.

Explaining Participation

Our goal in the preceding sections was to describe generally the data on farm women's interactions with USDA programs, activities and personnel, concentrating on comparing women's experiences and perceptions with those of men. In the following sections, we turn our attention to the analysis of women's experiences and attempt to identify and evaluate the factors related to participatory behavior. As in Chapters 2 and 3, our aim is to investigate the variability in women's participation, as we define it below, and to explore a number of hypotheses about respondents' characteristics or circumstances that might promote or inhibit program involvement.

First, however, we must face the major issue of exactly what we are able to analyze. We saw in Table 4.1 that, for any specific program, the proportion of women who reported recent involvement in an application process is quite small, ranging from 7 to 10 percent of the sample. These figures represent the activity of scores of thousands of farm and ranch women in the population. In our survey sample, however, we have only between 175 and 250 cases who were named on program applications in the last two to three years. Similarly, the proportion of women who reported having business contacts with agency personnel ranged from a low of 10 percent with the Farmers' Home Administration to a maximum of 26 percent with an Extension Service office. These numbers are simply too small to permit full-scale analysis of factors influencing involvement on a program-by-program basis.

Had the current survey been intended as a study of the working of particular programs, a different research design (requiring screening and oversampling program participants) would have been employed. Instead, our concern is with the more general characteristics of program experience and agency contact. Thus, we use data about individual programs as the basis for classifying respondents into broad categories of experience regardless of program content. We then explore the differences among respondents in each experience or involvement category on a wide range of characteristics, giving special emphasis to factors most closely associated with the absence of program or agency involvement.

Indexing Program and Agency Involvement

Our object is to make use of the range of survey items on various aspects of respondents' relationships with USDA to construct a single index or summary measure characterizing their overall involvement with programs and agencies. Specifying just how this is done, however, is not a simple matter, for there are many different conceptual schemes that might reasonably be employed, each with somewhat different properties and substantive interpretations. For example, we might wish to classify respondents into groups reflecting levels of involvement on the basis of the specific experiences they reported. At the low end of such a scale we might classify respondents who indicated that they had no awareness or familiarity with any of the three programs studied, had no business contacts with any of the agencies, attended no Extension classes, served on no committees, and so forth. At the opposite end of the classification would be those respondents who were highly involved with one or more programs, having their names on the applications and reporting business contacts with the agencies applied to. Intermediate levels would group together respondents who reported lesser degrees of involvement, such as participation in an Extension class or activity, or having business contacts with an agency, or being involved in a program application, or who combined two or more lower level involvement experiences.

The advantage of a scale of this kind is that each classification has a relatively clear substantive meaning since respondents are categorized on the basis of specific experiences or combinations of experiences reported. However, with a relatively large number of diverse involvement indicators, the difficulty of classifying intermediate level respondents mounts rapidly. For example, if a respondent has had business contact with SCS personnel (but has not requested assistance from SCS), and has served on a USDA panel, and has participated in a class on estate planning, which should take precedence in assigning this case to an involvement category? Obviously, too detailed a classifying scheme would defeat the conceptual simplicity we are trying to achieve.

One way around this difficulty is to construct the scale on a numerical basis, by simply counting up the number of involvement indicators to which a respondent gave a positive response. By this method, the more programs a respondent was familiar with, and the more agencies he or she had business contact with, and the more applications filed and classes taken, the higher the resulting involvement score. The distribution produced can then be divided into an appropriate number of categories (e.g., quartiles) or simply analyzed as a numerical measure of relative involvement.

The main advantage to this procedure is the very fact that it scales respondents according to their relative degrees of awareness, activity, and involvement, given the limitations of the data collected. Scores at either extreme clearly indicate respondents with low or high involvement levels, and intermediate rankings are determined simply by numerical values rather than by groupings based on particular reported experiences. One important disadvantage of such a procedure concerns the interpretations of scores in the middle range of the scale. Conceivably, a respondent who is somewhat familiar with all three programs could have a computed score equal to a respondent who singlehandedly obtains benefits for her operation from a single program. Numerically, we could not distinguish a case of broad, shallow involvement from another with narrow but more intense involvement. This problem can be reduced to some extent by giving some involvement indicators greater weight in the index construction procedure, on the basis of either relative difficulty or perceived centrality to the concept of involvement.

For the remainder of the analysis in this chapter, we have chosen to classify respondents on a weighted numerical scale of relative involvement with USDA programs, agencies, and personnel. The scale score for each respondent is computed as a weighted sum of the survey items related to involvement and common to both the men's and the women's versions of the questionnaire. Relatively greater weight was given to behavioral measures such as placing one's name on the application form or having business contact with an agency than to measures of program knowledge or familarity. The highest weights were associated with filing program applications in one's own name only, to the combination of business contacts and personal involvement in applications, and to the relatively difficult activity of having served on official policy or administrative committees. (For a complete description of the mathematical routine for computing relative involvement scores, see Appendix E.)

Table 4.16 presents some distributional statistics for women and men on the relative involvement scale. Whether we look at the mean, the median, or the mode, men are about 10 points higher than women on the index. The male sample also has a slightly higher standard deviation than the female sample, indicating a bit more dispersion or variability in involvement levels among men. To provide the reader with some intuitive notion of the relationship between scale scores and real behavior, Table 4.17 displays a series of comparisons of mean (average) scale scores by specific types of reported involvement. In that table we see, for example, that among the 35 percent of women respondents who are unfamiliar with all three programs studied the average relative involvement score is only 5.43, while among the 65 percent of women who are at least

TABLE 4.16

DISTRIBUTIONAL STATISTICS FOR RELATIVE INVOLVEMENT INDEX BY SEX

Distributional Statistics	Women	Men
Mean (average)	14.56	24.32
Standard deviation	11.97	16.20
Median	11.30	21.28
Mode	3	13
N	(2,509)	(569)

TABLE 4.17

MEAN RELATIVE INVOLVEMENT INDEX SCORES BY SPECIFIC INVOLVEMENT INDICATORS

Involvement Indicator	Women		Men	
	Percent of sample	Mean Involvement Score	Percent of Sample	Mean Involvement Score
1. Program familiarity				
R is unaware of or unfamiliar with all 3 programs	35	5.43	18	6.88
R is somewhat familiar with at least one program.	65	19.52	82	28.10
eta		.56		.50
2. Program application				
No application to any of the 3 programs	62	8.92	60	14.69
Operation applied to one or more programs but R not named on application .	18	15.82	2	19.04
R named on at least one program application	20	30.47	38	40.03
eta		.71		.76
3. Business contacts				
No business contact with any of the 4 agencies	56	7.97	28	9.28
Business contact with at least 1 agency	44	23.09	72	30.20
eta		.63		.58
4. Extension programs				
R is involved in none of the listed activities	59	9.39	44	14.41
R is involved in one or more of the listed activities .	41	21.94	56	31.99
eta		.52		.54
5. Official committees				
R has not served on listed type of committee and is unwilling to do so in the future	52	8.9	34	13.78
R has not served but is willing to do so in the future	17	16.03	33	25.26
R has served on one or more of the listed committees..	31	23.04	34	34.05
eta		.52		.52

somewhat familiar with one or more of the programs, the average score is 19.52. Similarly, involvement scores average 7.97 for the 56 percent of women who have had no recent business contacts with any of the four agencies studied, but are about 15 points higher on average (23.09) among the 44 percent of women who have had such contacts.

Among male respondents, the mean differences for each indicator breakdown are generally larger than those for women. For example, the difference associated with business contacts is about 21 points for men and 15 points for women. This result indicates that men who report a given type of involvement are more likely than women to report other kinds of involvement as well. For example, recall our finding in Table 4.1 that when an operation files an application, men are much more likely than women to be named on the application form, and much more likely to be sole applicants for their enterprise. Men are also more likely than women (35 percent versus 16 percent) to combine program applications and business contacts with the same agency, leading to higher average scores among males who have applied or have had business contacts.

Correlation coefficients (eta's) between scale scores and individual involvement indicators in Table 4.17 are strong and similar for both genders. The somewhat higher coefficient with the Program Application indicator simply reflects the relatively greater weight given application involvement in the computation of overall involvement scores.

Association between Relative Involvement and Other Respondent Characteristics

We now turn to explore the interrelationships between our measure of involvement with USDA Programs and agencies and other respondent characteristics. To do so, we will first classify all respondents into one of four equal-sized groups, or quartiles, based on their computed relative involvement scores. That is, group 1 will contain those with the lowest scores, and group 4 those with the highest relative involvement scores. Table 4.18 shows the range of scores included in each quartile. The ranges differ for men and women, but this is of little import since our object is only to arrive at relative ranking of cases for each sex separately, not to compare the men's and women's quartiles. The reader should note, however, that in terms of absolute comparisons the range of scores that encompasses the third (next to highest) quartile for women corresponds to the second (next to lowest) quartile for men. In other words, half the men in our sample actually scored as high or higher in absolute terms than three-quarters of the women.

TABLE 4.18

FOUR-LEVEL RELATIVE INVOLVEMENT SCALE

Group or Quartile	Women			Men		
	Numerical Range	Mean Numerical Score	Percent of Cases	Numerical Range	Mean Numerical Score	Percent of Cases
1	0-5	2.49	24	0-11	6.54	26
2	6-11	8.41	26	12-21	16.38	24
3	12-21	15.76	25	22-35	27.36	25
4	22-71	31.96	25	36-71	47.32	25
Total N		14.56	100 (2,509)		24.32	100 (569)

To further aid comparisons among quartiles and between genders, mean involvement scores are also listed for each quartile in Table 4.18. These can be compared with the mean scores presented in Table 4.17 for respondents who reported specific types of activity or involvement.

Thus respondents in the first quartile (lowest involvement level) appear to be most like respondents who have never heard about or are unfamiliar with all three programs we asked about. Those in the fourth quartile (highest level) have mean scores even higher than those for respondents whose names appeared on program applications. Further, the differences among quartile means for each gender give evidence that our four-level classification is a reasonably successful way of grouping respondents together. On average, there are meaningful differences in the relative involvement levels of all four groups.

In Figures 4.1 through 4.40 we display graphically data from a wide variety of survey items for each quartile of our relative involvement scale. The items are of three general types--personal background characteristics, features of respondents' farm or ranch operations, and indicators of respondents' relationships to their operations. Each represents a hypothesis about factors that might tend to enhance or to inhibit involvement with USDA programs or agencies. Many more items were tested but found, sometimes surprisingly, to have no detectable association with relative involvement. These are discussed in the text but are not graphed.

Whenever comparable data was collected for both women and men, graphs are displayed side by side. Note that because of differences in overall response patterns between women and men, the ranges for the scales for the two graphs will occasionally differ. The scale units are always constant for the two graphs, however, allowing easy gender comparisons of the association between each item and our relative involvement measure. All of the items presented have statistically significant relationships with relative involvement (indicated by *) for at least one gender, and usually for both.

The first six items represent personal respondent characteristics usually found to be important correlates in sociological, economic, and social-psychological analyses. With one or two exceptions (for example, educational attainment) these variables were expected to have relatively weak relationships with involvement levels compared with most measures in the other two groups. Our analysis produced several surprises, however, concerning both the size and the direction of these relationships.

Figure 4.1 displays the average (mean) age for respondents in each of the relative involvement quartiles. We had expected that respondents' ages would be strongly related to their level of experience in agricultural matters, and would therefore have a moderate positive relationship with involvement. In fact, we find there is a small but statistically significant negative association for both sexes. That is, respondents with the highest involvement levels tend on average to be slightly younger than those with lower levels--and the difference appears to be slightly greater for men than for women. As we show below, however, this finding does not support the conclusion that those with most experience are least involved. Our measures of the number of years and the proportion of respondents' lives spent on farms or ranches tell quite a different story.

Respondents' educational attainment was examined (Figure 4.2) on the assumption that all aspects of program and agency involvement would be more common among those with higher level verbal, mathematical, and reasoning skills that formal schooling is thought to provide. We found robust and comparable relationships between education and involvement for both men and women. The graph shows that, among women, less than one-quarter of those in the lowest involvement group have had formal training beyond high school. In the highest involvement category, twice as many (47 percent) have gone beyond high school. Among men, the ratio is nearly three to one (16 percent compared to 46 percent). Examining the relationship from the opposite point of view leads us to the same conclusion: 31 percent of the women in the lowest involvement quartile reported that they had not finished high school, compared to only 8 percent in the highest involvement quartile, and the figures are very similar for men (not graphed). Clearly, nonparticipants and those less involved with government programs and agencies tend to be concentrated at the lower end of the educational resource scale, and this is true for both sexes.

We also hypothesized that off-farm employment would be likely to inhibit involvement simply because respondents who held jobs would have less time available to devote to becoming involved with programs and agencies. Figure 4.3 shows that while the hypothesis seems to hold for men, it does not hold for women. Over three-fifths of the men in the lowest involvement group reported that they currently worked at an off-farm job. The proportion declined steadily with each higher involvement category; only about one-quarter of those in the highest quartile said they worked at an off-farm job. In contrast, about 30 percent of the women in each involvement category had outside jobs. For women, at least, having an off-farm job does not seem to have a restricting effect on involvement.

By similar logic, we expected that the number of hours spent on any off-farm job would also be related to involvement levels. This hypothesis was not confirmed, however, since the mean and median number of hours spent on the job was generally constant at about 40 hours across involvement groups for those who had jobs.

The next two graphs deal with other items which, like off-farm jobs, we thought would compete for respondents' time and attention, perhaps displacing program involvement. On both counts, our expectations were overturned. Although very few women reported that they had been appointed or elected to local governing boards, school boards, town councils, and so forth, the proportion was considerably higher among those in the highest involvement quartile than in the lowest (16 percent compared to 3 percent, Figure 4.4). Similarly, data for both men and women show reasonably strong relationships between involvement levels and membership in community organizations such as church groups, the Parent-Teacher's Association, and so forth. In Figure 4.5 we see that, for both genders, the likelihood of belonging to community organizations increases steadily with relative involvement level. These activities do not displace involvement. On the contrary, as other research on political behavior has demonstrated, such activities tend to promote participants' social and communications skills, and are thus likely to raise involvement levels. While the proportion of members among those in the lowest involvement group is not insignificant, it is only about half the membership rate for the highest quartile.

One final "personal distraction" hypothesis was examined with negative results. We expected that program involvement would be relatively lower among women who had larger numbers of children living at home, especially children under the age of six. In both cases, however, we found barely observable, not statistically significant increases in

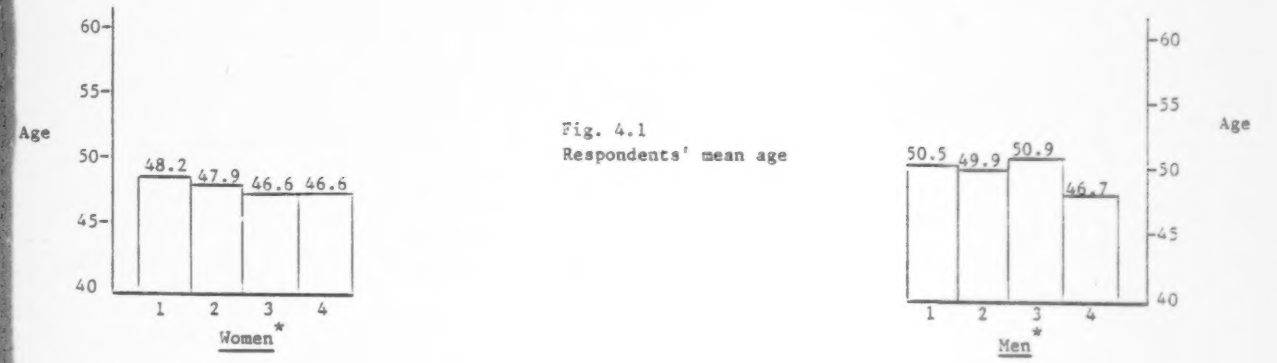


Fig. 4.1
Respondents' mean age

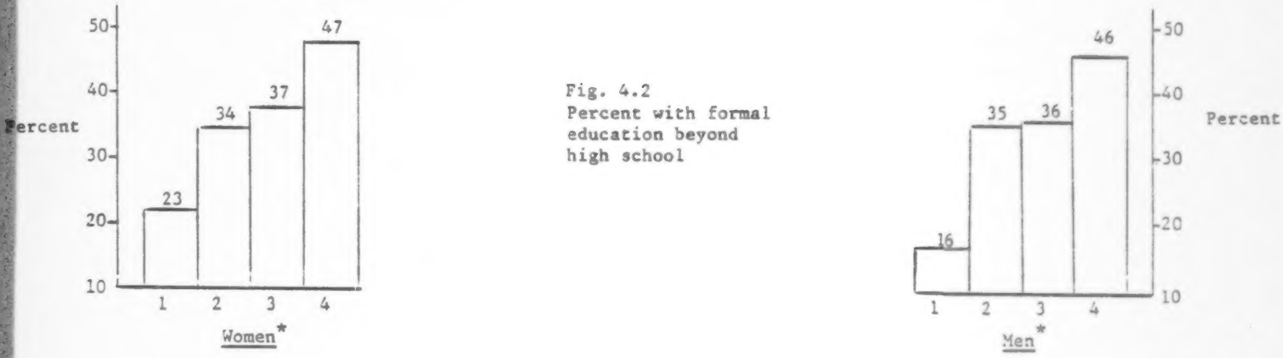


Fig. 4.2
Percent with formal education beyond high school

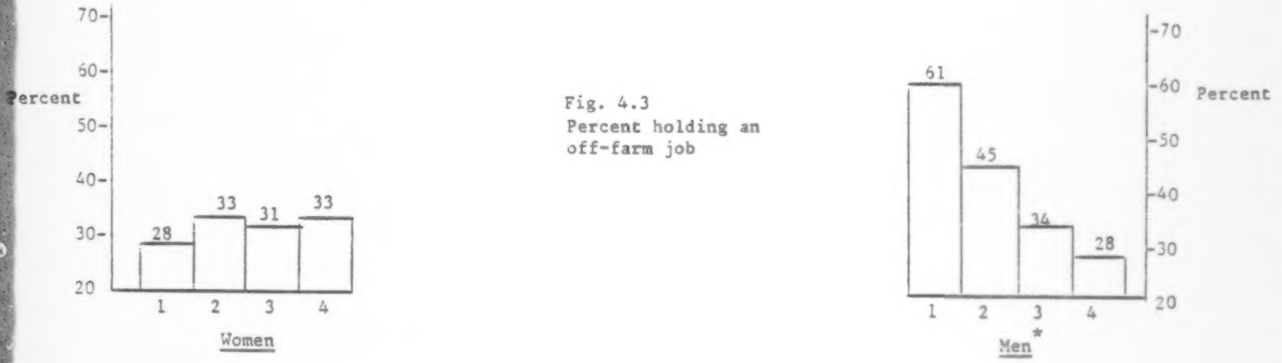


Fig. 4.3
Percent holding an off-farm job

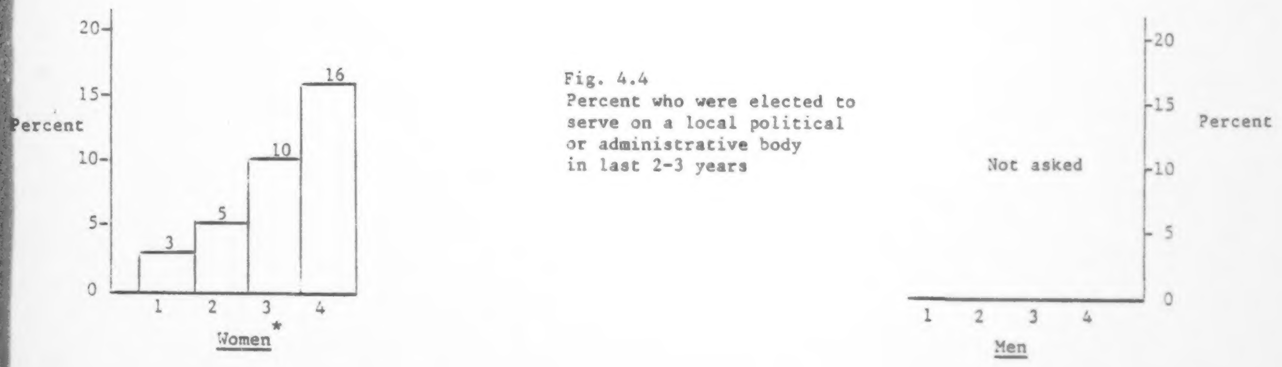


Fig. 4.4
Percent who were elected to serve on a local political or administrative body in last 2-3 years

the number of children at home and the number of children under six. Again, we are led to the conclusion that there is no support for the notion that women's relative involvement is influenced by distractions or traditional competing activities. As we suggest below, we find more support for the idea that involvement levels for both sexes are conditioned more by positive factors that must be present to stimulate involvement in activities.

Formal educational attainment is one such personal characteristic. Another may be the existence of a sense of independence or responsibility to pursue information, technical assistance, or financial benefits as an individual rather than solely as a member of a family or economic or agricultural unit. Unfortunately, we do not have the survey measures that would be necessary for a detailed exploration of a theory of this kind. We do have one piece of data, however, that might serve as an indicator of respondents' style in this regard. Several survey items dealt with the type of financial arrangements respondents participate in--savings and checking accounts, charge accounts and credit cards, bank loans, and the like. In general, we found that the higher a woman's involvement level, the more likely she was to indicate that she was a party to each arrangement. The strongest associations with relative involvement, however, were shown for items that specified bank accounts, credit cards, or bank loans in the woman's name alone. Figure 4.6 shows that, within the lowest involvement group, 46 percent of the women said they had at least one of the above three arrangements in their own name alone; within the highest group, 64 percent had made one or more personal financial arrangements. At least from a financial standpoint, greater involvement appears to be related to personal independence.

The next cluster of items analyzed are measures of farm or ranch characteristics--indicators of the context or environment in which our respondents live and work. All of the items investigated are believed to have some bearing on program or agency involvement, but none of the items under this heading are explicit measures of respondents' reported involvement in farm work, administration, or decision-making. Like most of the personal characteristics discussed above, these items were expected to show relatively limited association with relative involvement levels. The size, complexity, or sales volume of an operation may indeed influence the need or desirability of dealing with the government programs or agencies studied in this survey. However, even if this is so, there is no assurance that such needs or opportunities will affect any one individual (i.e., the husband or wife) on an operation. A working hypothesis (to be examined in a subsequent section) is that farm and ranch characteristics are related to respondents' overall involvement in farm work and management, which is in turn linked to program awareness and agency contact.

Of course, since our indicators of operation characteristics are themselves survey responses (rather than independent measures from another source), there is a sense in which these items are also measures of respondents' general involvement in their operations and in agriculture. That is, a respondent must have some minimal level of involvement to answer these questions. This would be a serious problem, however, only if large numbers of respondents did not know the salient features of their operations, or gave responses that were materially different from reality. With the exception of the farm financial items, the proportion of missing answers ("don't know's") from both men and women were quite low, and the level of agreement in responses between members of the same household was reasonably high--suggesting that the survey responses are good approximations of true farm characteristics.

The three financial questions on net farm income, total farm worth, and total debt are a different matter, however, since between 18 and 33 percent of the women (though only 4 to 9 percent of the men) claimed that they did not know the answers. We cannot be entirely sure that women were not simply choosing this response as a diplomatic way of refusing to answer. Our strategy is to examine the financial items as if they accurately represented the income, debt, and value levels when reported, but subject to the strong qualification that they might be biased by nonresponse. In addition, in the remainder of this section we examine the relationship between respondents' awareness of financial data (as another measure of general farm involvement) and our relative program involvement indicator.

Figure 4.7 depicts the association between relative involvement and size of operation as measured by median total acreage for each quartile. The findings are quite strong for both genders. In the lowest involvement group, median reported farm size was 85 acres for women and 64 acres for men. Approximately one-third of both men and women in this category lived on operations of less than 40 acres. At the other extreme, women and men in the topmost quartile reported median sizes of 350 acres and 600 acres respectively. In this group, only 8 percent of women and 1 percent of men reported fewer than 40 acres.

Figure 4.8 displays an indicator of product diversity and is a slightly more complicated presentation than the others. In this figure, all the respondents in each quartile are classified according

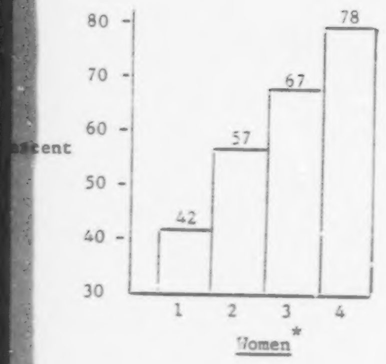
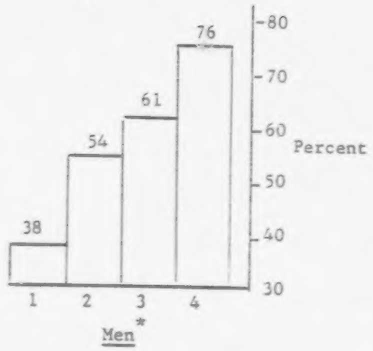


Fig. 4.5
Percent who belong to community organizations such as church groups, PTA or League of Women Voters



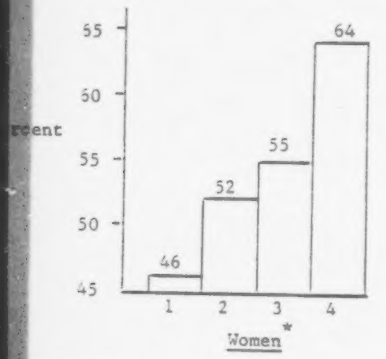
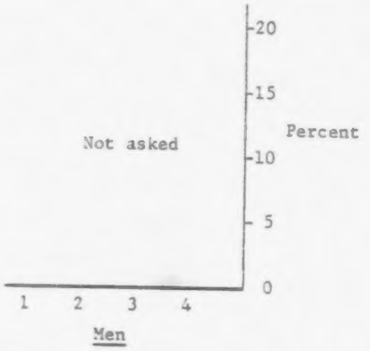


Fig. 4.6
Percent who have bank accounts, credit or charge accounts, or bank loans in their names only



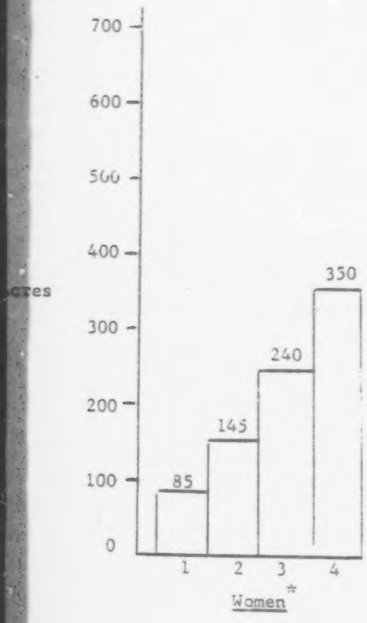
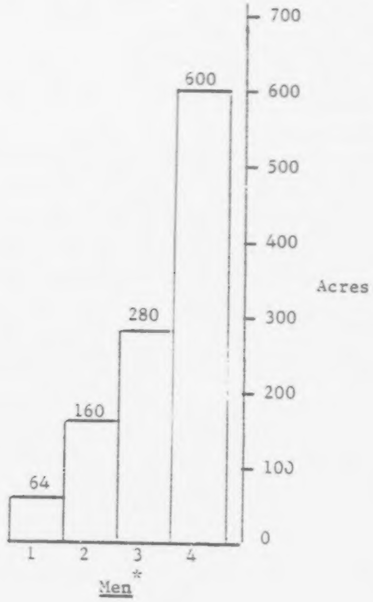


Fig. 4.7
Total acreage (median)



to the proportion of total gross sales attributable to crops versus the proportion from livestock. The lower segment in each quartile includes respondents who reported having 90 to 100 percent of gross sales in livestock or animal products. The upper segment contains respondents who reported 90 to 100 percent of gross sales in crops. The middle segment contains those with more even mixes of sales from crops and livestock.

The interpretation of this figure is necessarily ambiguous. Data for both men and women show that operations that sell primarily livestock predominate in the lowest involvement category, but are a minority of those with the highest involvement levels. Respondents whose operations sell mostly crops are a roughly constant proportion across involvement levels for women and increase slightly with involvement level for men. The most notable finding is that the percentage of respondents reporting crop-livestock mixtures in sales grows steadily in each higher involvement quartile, from only 14 to 16 percent of the lowest involvement category to about 40 percent of the highest. The data suggest that those who are relatively least involved with programs and agencies are those who are most "specialized," at least in terms of mixing crops and stock. We hesitate to carry this interpretation too far, however, since it is possible that the programs and agencies considered in this study may have generally less appeal or relevance to livestock producers. This is clearly true of the ASCS Price Support Program, but should not generally be true for contact with ASCS personnel or offices, or for the other programs and agencies under study.

The next several figures help to elaborate the findings in the two preceding graphs. In Figure 4.9 we see that total cropland acreage shows a strong positive association with relative involvement levels, and does so for both sexes. Median crop acreage reported by women ranges from 20 acres in the lowest involvement level to 200 acres in the fourth quartile. The trend is even more extreme among males, ranging from 8 acres in the lowest involvment group up to 400 acres in the highest. The next two figures (4.10 and 4.11) show that, among women, soybean producers were more common in the higher involvement categories than in the lower ones, and that, among respondents of either gender, winter wheat producers were more common among those with higher relative involvement levels. Producers of all other crops showed up in relatively equal proportions in all four involvement quartiles.

Despite the fact that the proportion who specialize in livestock production decreases with relative involvement, there is still a slight increase in the overall percentage of operations that produce livestock or animal products for sale within each higher involvement category. These differences are so small, however, that they attain statistical significance only in the female sample, not in the much smaller sample of males, even though the quartile differences are roughly equal in both samples. Findings with respect to livestock numbers are somewhat clearer. For example, the proportion of operations producing beef cattle ranges from 41 percent in the lowest involvement group to 49 percent in the highest (Figure 4.12, women's responses). However, the mean number of beef cattle jumps from 26 in the first quartile to 87 in the fourth (Figure 4.13, women's data). The next two pairs of figures

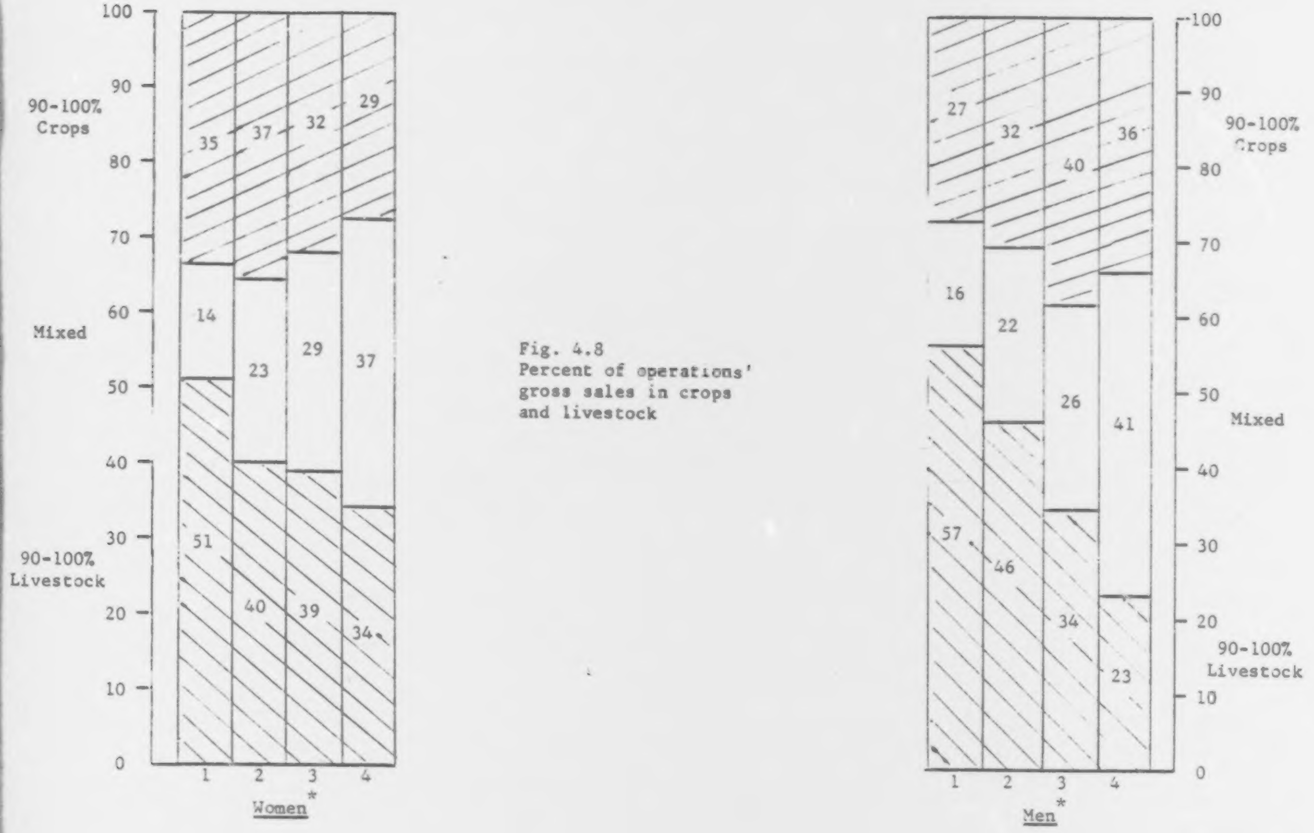


Fig. 4.8
Percent of operations' gross sales in crops and livestock

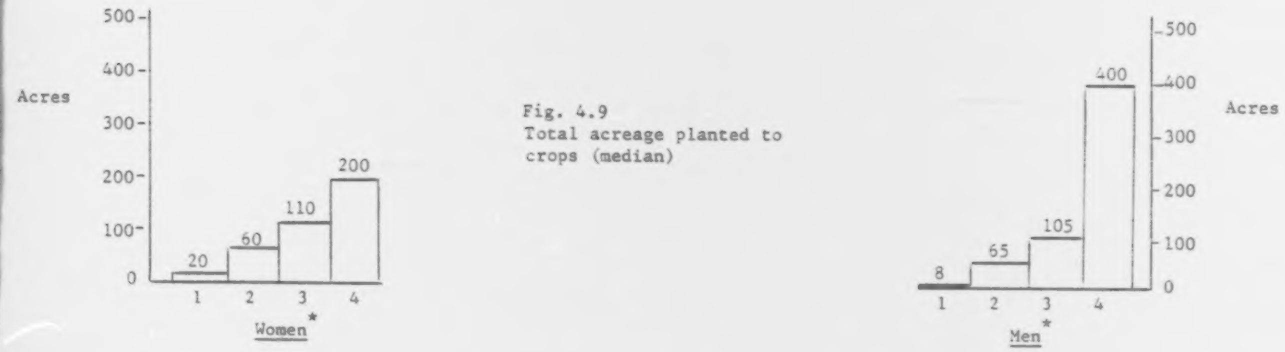


Fig. 4.9
Total acreage planted to crops (median)

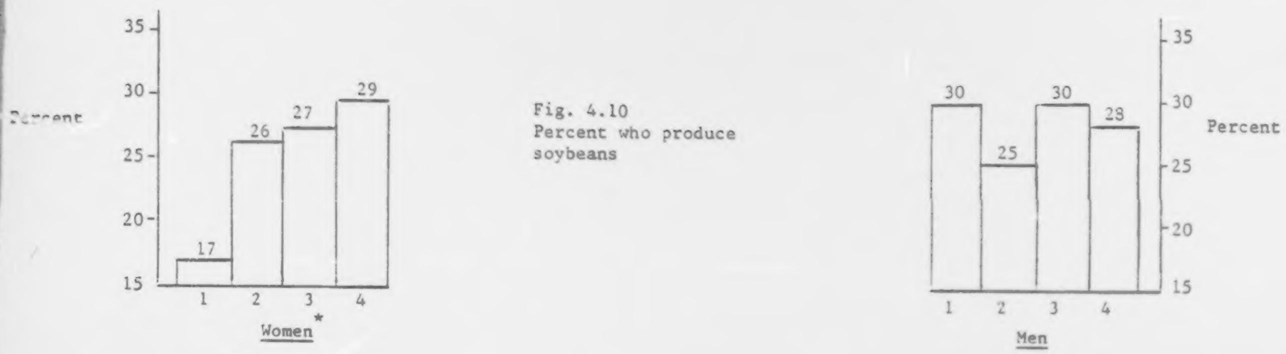


Fig. 4.10
Percent who produce soybeans

repeat this pattern. Looking at women's responses, the proportion of operations producing either dairy products or hogs and pigs is only about 7 percentage points higher in the fourth involvement quartile compared to the first (Fig. 4.14). Yet, on average, respondents in the highest involvement groups reported dairy herds about three times the size of those in the lowest quartile. The contrast is even greater among pork producers, with mean numbers of hogs and pigs ranging from 21 in the lowest group up to 93 in the highest level (Figure 4.15. women's responses). All of these data contribute to the conclusion that the higher a respondent's relative involvement score, the more likely he or she is to be part of a large-scale operation producing both crops and livestock; and the lower a respondent's involvement score, the more likely his or her operation is to be smaller in scale and to concentrate on either crops or livestock--especially livestock or related products.

Like the personal-distraction hypotheses discussed above, we also suspected that certain characteristics of farms or ranches might tend to interfere with or displace women from involvement with government programs and agencies. We speculated, for example, that the more people there were involved in the day-to-day running of the operation, the less likely it would be that the farm woman would take an active part in filing applications, contacting agencies, or gathering information. The next three figures present tests of that hypothesis.

In each case, the data flatly contradict our expectations. Figure 4.18 displays the percentage of operations in each involvement category that employ two or more hired hands. Women in the highest quartile are 10 percentage points more likely than those in the lowest

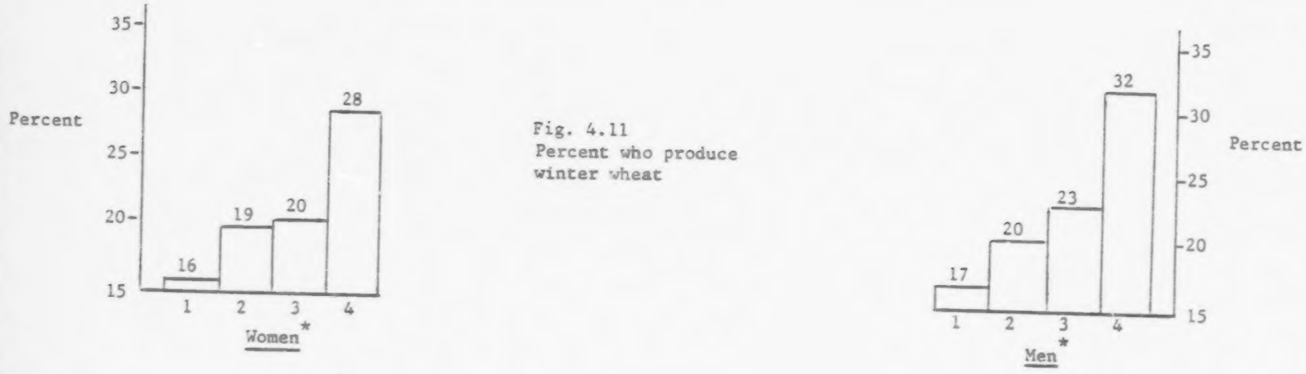


Fig. 4.11
Percent who produce
winter wheat

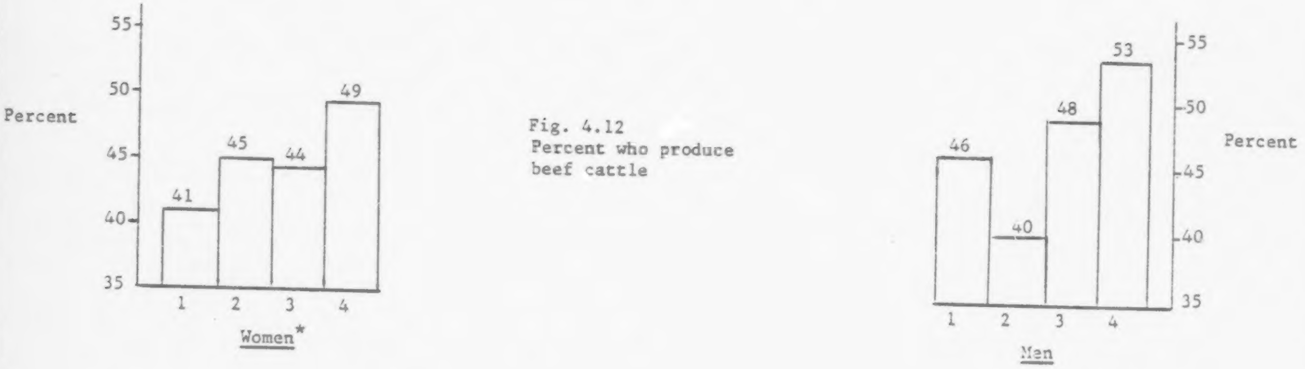


Fig. 4.12
Percent who produce
beef cattle

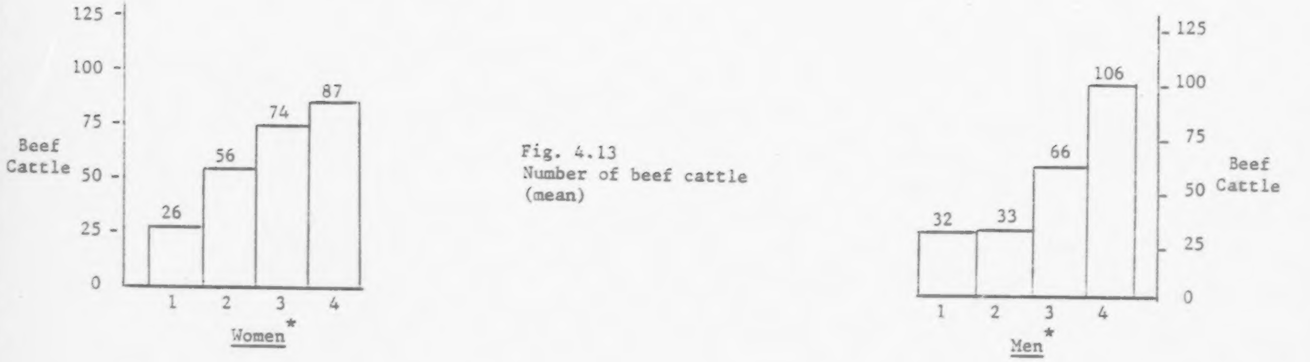


Fig. 4.13
Number of beef cattle
(mean)

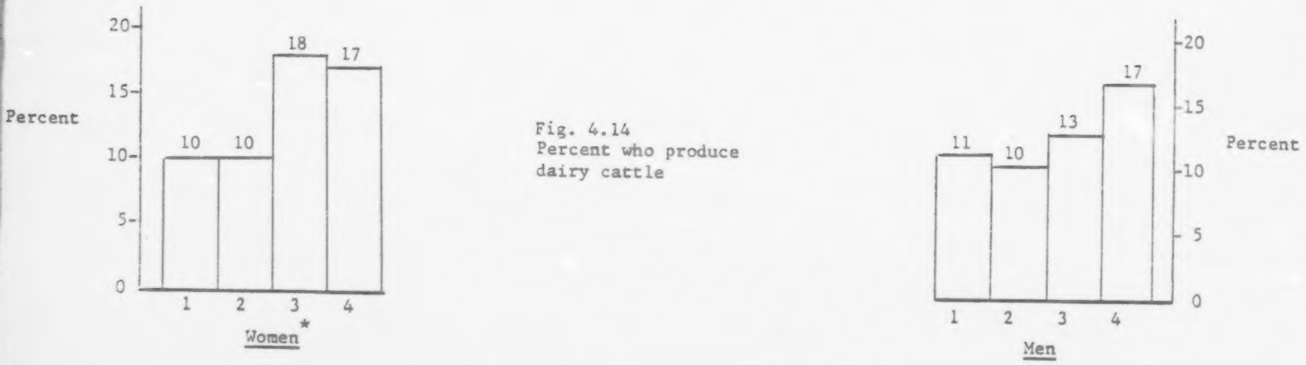


Fig. 4.14
Percent who produce
dairy cattle

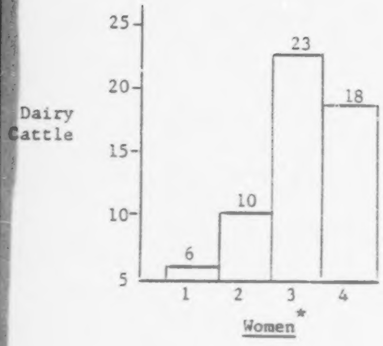
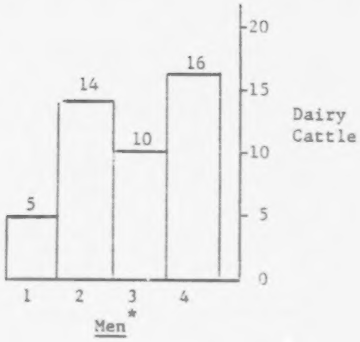


Fig. 4.15
Number of dairy cattle (mean)



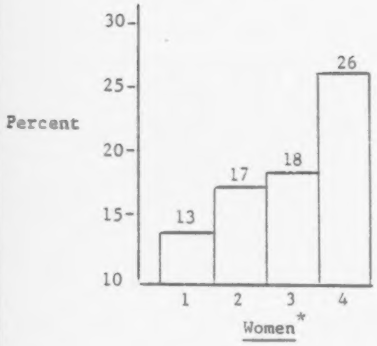
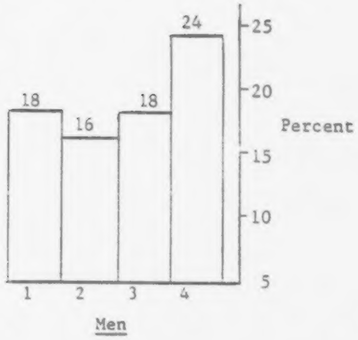


Fig. 4.16
Percent who produce hogs and pigs



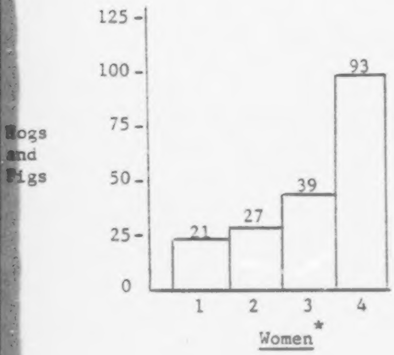
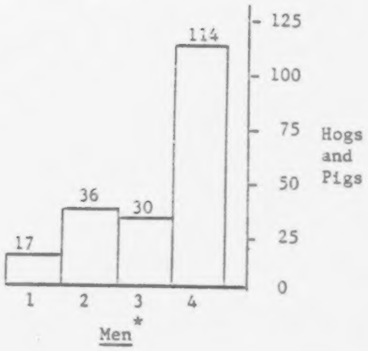


Fig. 4.17
Number of hogs and pigs (mean)



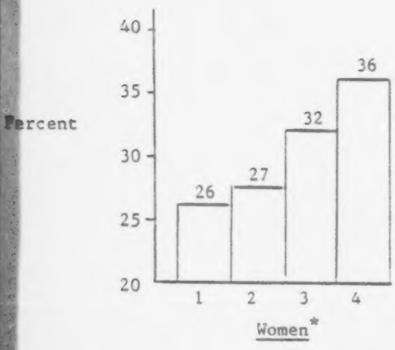
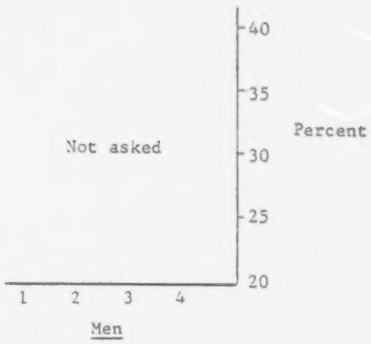


Fig. 4.18
Percent with two or more hired hands



quartile to live on operations that have two or more paid employees. Next, we see in Fig. 4.19 that, whereas only 29 percent of those in the lowest quartile reported that two or more family members contributed to daily farm work, 42 percent of those in the highest involvement quartile meet this condition. Finally, Figure 4.20 shows that for both men and women those in the higher involvement groups are more likely to report that someone else besides their spouse (if any) regularly helped to make important management decisions for the operation. These results appear to indicate that there is little interference with involvement from hired hands, family workers, or other decision-makers. We are inclined to be cautious about reaching that conclusion, however. The number of hired hands, family workers, and outside decision-makers varies directly with the size and scope of the operation. It may be that when size is held constant the hypothesized interference with women's involvement will emerge--a possibility we will examine further on in this report.

The final set of items in this cluster are indicators of the operation's financial status. Although our conclusions here must be tempered by the problem of missing responses from women, the findings are too strong to be ignored. In addition, the general correspondence in the findings for men and women--considered in light of the very low levels of missing data for men--convince us that any biases due to nonresponse by women are probably quite modest. For both sexes, the data show that respondents in succeedingly higher involvement categories reported higher net farm incomes, higher total farm worth, and greater total debt (Figures 4.21 through 4.24).

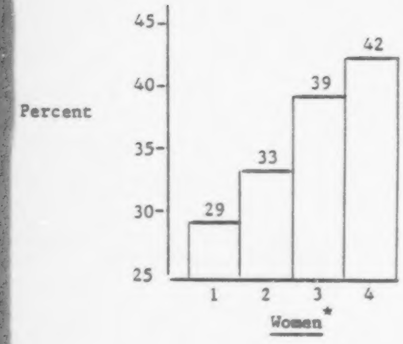
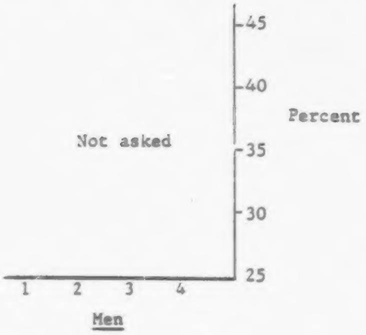


Fig. 4.19
Percent with two or more other family members participating in day-to-day farm work



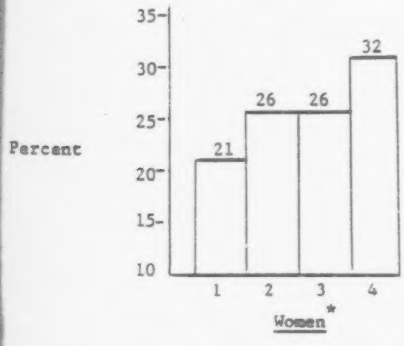
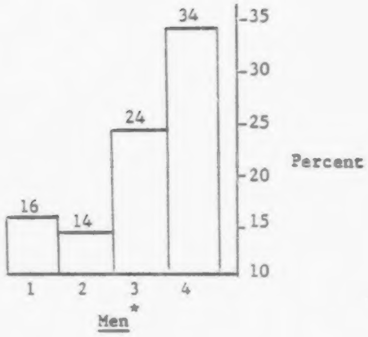


Fig. 4.20
Percent for whom someone else (besides spouse) helps to make important farm decisions



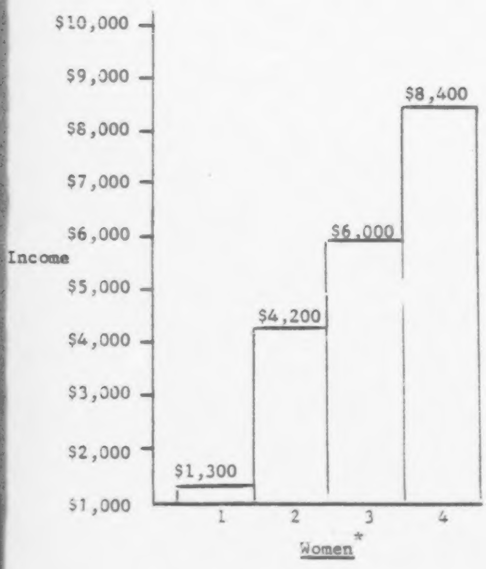
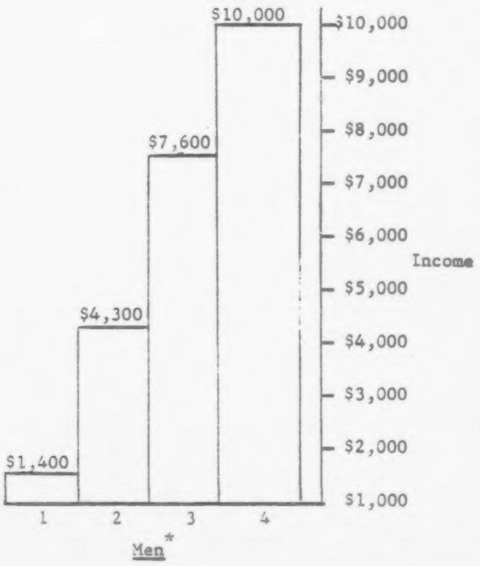


Fig. 4.21
1979 Net farm income (median in dollars)



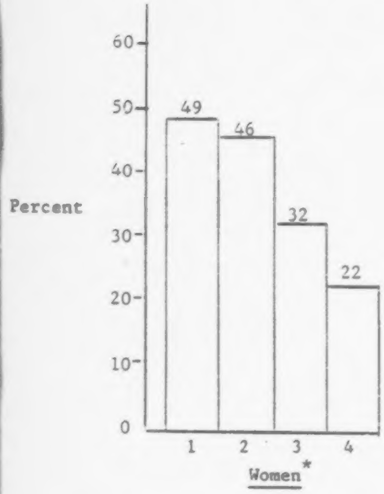
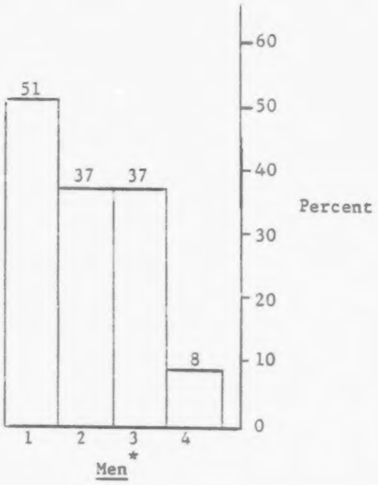


Fig. 4.22
Percent with no farm debt



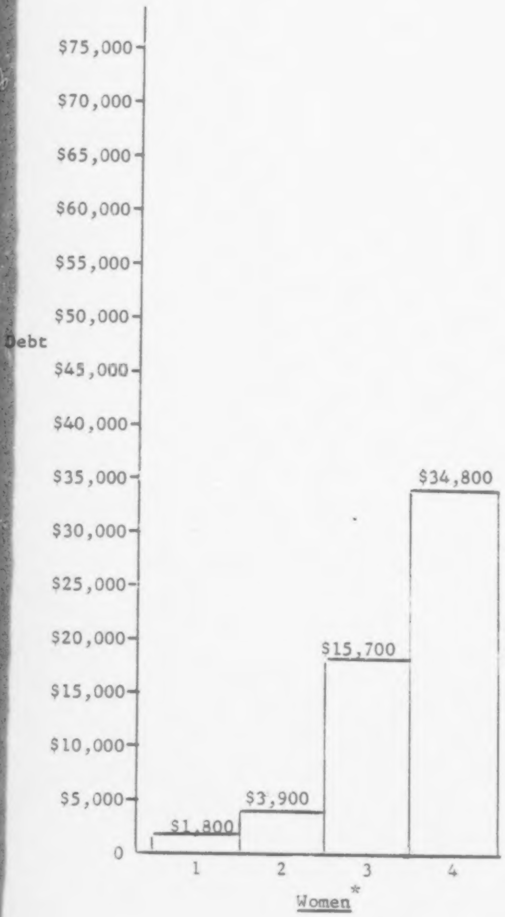
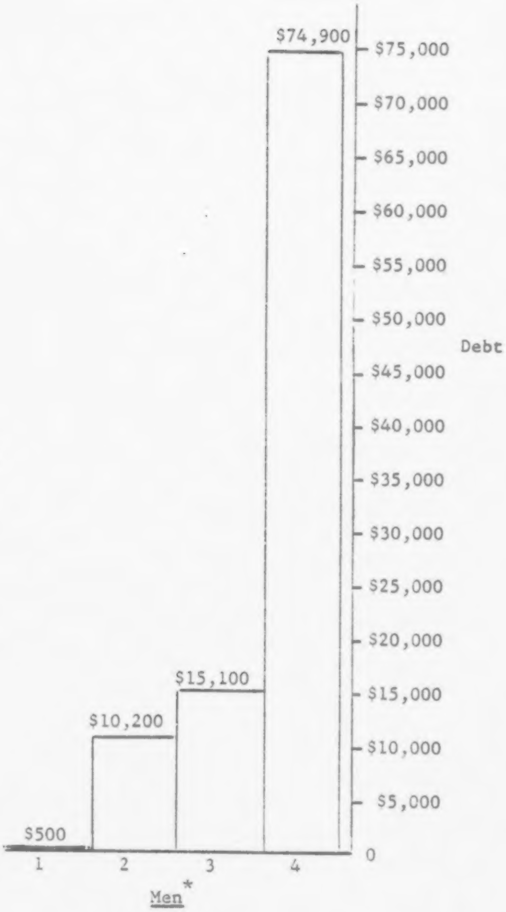


Fig. 4.23
Total farm debt
(median in dollars)



In a sense, these financial measures are simply additional measures of size of the operation, since those with more land, buildings, machinery, and inventory will obviously have greater worth, will probably require higher levels of credit and financing, and will probably hold a higher profit margin. The financial items and the size measures are highly intercorrelated. They are far from perfectly correlated, however, and it is instructive to see how much variability there is across involvement levels. Note, for example, that while median total farm worth reported by women in the fourth involvement quartile is about two and one-half times that for those in the lowest group, the median net farm income in the highest women's quartile is more than six times that for those in the lowest category. Furthermore, the median debt ratio between the highest and lowest women's involvement quartiles is over 19 to 1. About half of both the men and the women in the lowest involvement group reported that their operation carries no debt load. In the highest quartile, only 22 percent of women and only 8 percent of men reported zero debt. This may be mainly due to the fact that two of the programs and agencies studied were set up to provide credit and related services. However, when all our economic indicators are considered together, we perceive a moderate to strong association between program and agency involvement as we have measured it and the economic activity and prosperity of the respondent's enterprise.

Finally, we present a series of 16 graphs that display measures of respondents' personal involvement with the work and management of their operations within each of our program and agency involvement levels. In the first two figures, we return to our earlier finding of a slight inverse relationship between relative involvement and respondent's age.

Figures 4.25 and 4.26 demonstrate that respondents' age is not a good surrogate for agricultural experience. Both these graphs show that men and women in higher involvement groups have spent more years and larger percentages of their lifetimes living on farms or ranches. These relationships are not very strong, however, and must certainly be considered less powerful than others we have observed.

Relatively modest associations were found between involvement and two measures of respondents' legal relationship to their land. Compared to those in the lowest group, women in the highest involvement quartile were 11 percentage points more likely to have their names on the deeds to any farmland owned by the family, and were 12 points more likely to have their names included on leases or contracts for any rented land (Figures 4.27 through 4.29).

Among the strongest correlates with our involvement indicator are two self-perception measures that allowed respondents to classify themselves according to their own beliefs about how involved with or committed to their farms they were. Women (but not men) were asked whether they considered themselves to be the main operator or one of the main operators of their farms or ranches. In addition, respondents of both sexes were asked whether they could continue to run their operations on their own if something should happen to their spouses. We found that less than half (44 percent) of the women in the lowest relative involvement group considered themselves to be one of the main operators of their enterprises. Those in the second and third quartiles were slightly more likely to endorse this label, with 51 percent and 56 percent respectively describing themselves as one of the main operators. In

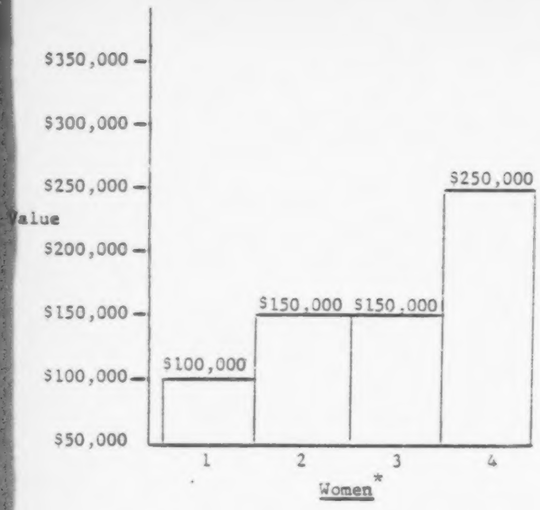
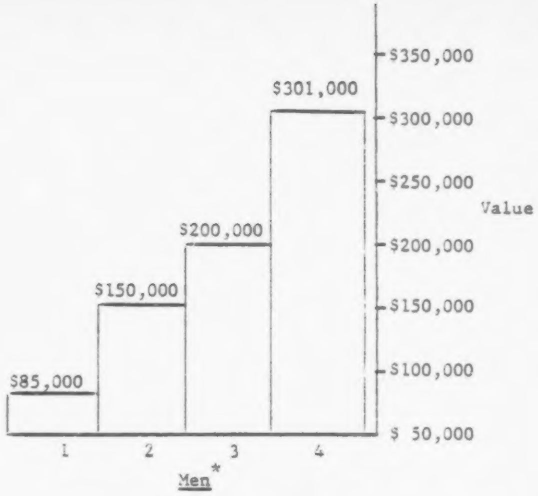


Fig. 4.24
Total farm value (median in dollars)



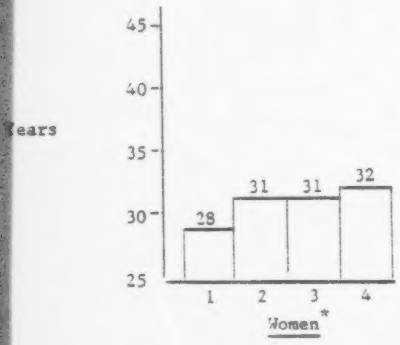
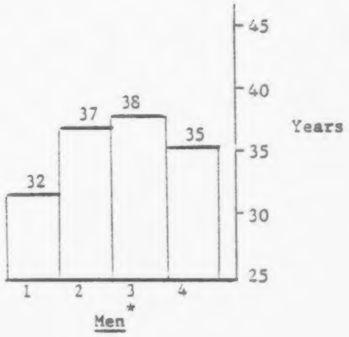


Fig. 4.25
Number of years spent on farm or ranch (mean)



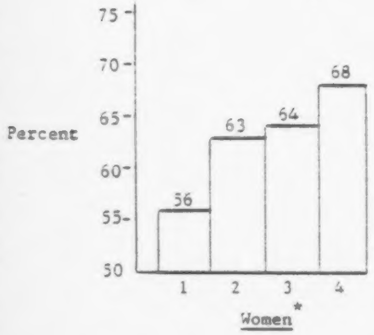
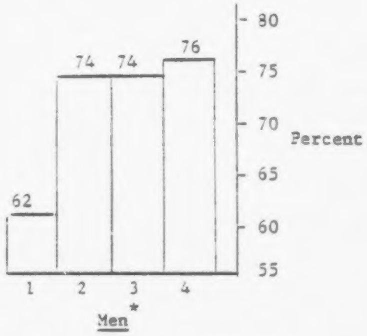


Fig. 4.26
Percent of respondent's life spent on farm (mean)



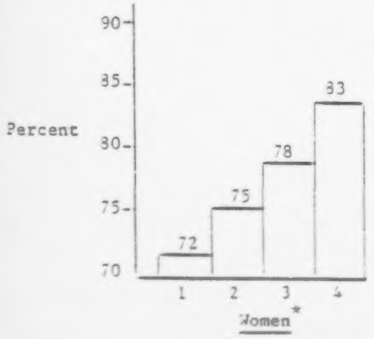
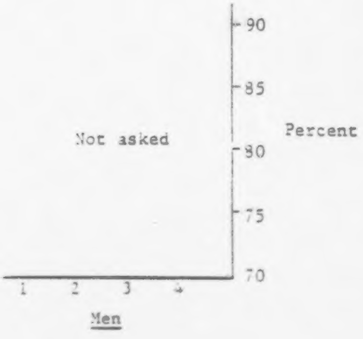


Fig. 4.27
Percent whose name appears on deed for owned land



contrast, over 70 percent of the women in the highest involvement class considered themselves to be operators (Figure 4.29).

Similar results were obtained for the item on running the operation alone. Less than half the women in the lowest quartile said that they could definitely or probably continue to manage their farms or ranches on their own. The proportion giving this response increases steadily across involvement categories, and within the highest quartile 74 percent indicated that they could continue alone. Figure 4.30 also shows that the proportion of women who said they could definitely run their operations alone increased from 17 percent of those in the lowest involvement group to about twice that level (33 percent) in the highest. The results for the male sample on this item are less clear cut. The slight growth in combined positive responses from 89 percent to 93 percent is not statistically significant, but the increase in the proportion who said they could definitely continue, from 59 percent in the lowest quartile to 73 percent in the third quartile, is worth noting.

The results for these attitudinal measures are corroborated by behavioral reports concerning the extent of respondents' participation in farm tasks, decision-making, and financial accounting. (This is not surprising, given the relationship between self-perceptions and behavior described in Chapter 2.) The data on task involvement presented in Figure 4.31 is based on responses concerning levels of involvement in a finite, but reasonably varied list of typical farm or ranch tasks. (See Question 13 in the women's questionnaire and Question 9 in the men's questionnaire in Appendix C. Non-farm tasks, such as items J, N, and O were excluded.) For each individual, we computed the proportion of tasks performed on the respondent's operation that the respondent reported

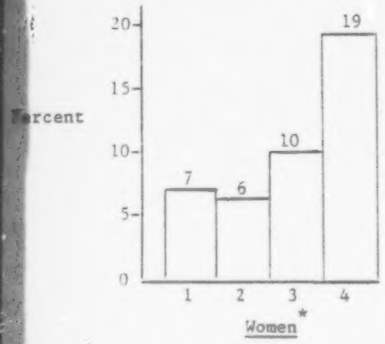
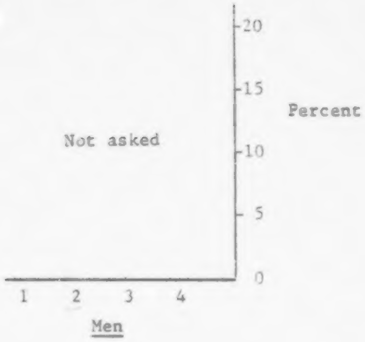


Fig. 4.28
Percent whose name appears on any rented contracts for farmland



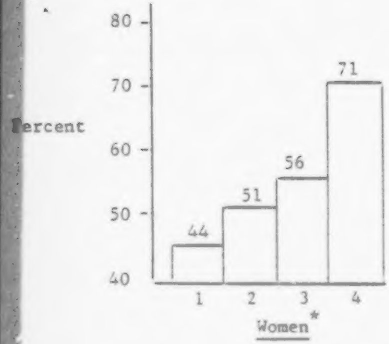
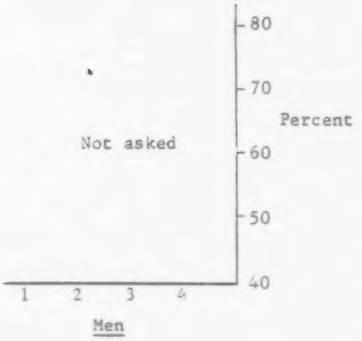


Fig. 4.29
Percent who consider themselves one of the main operators of their farm or ranch



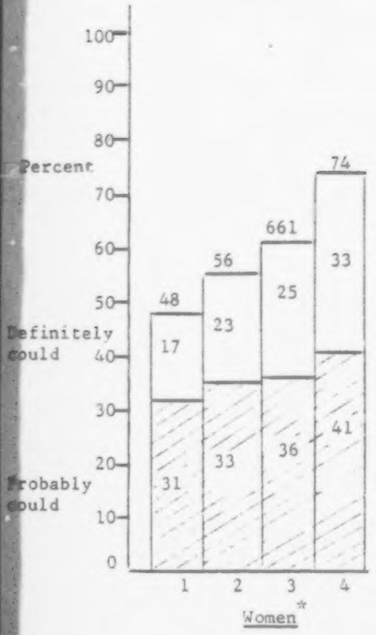
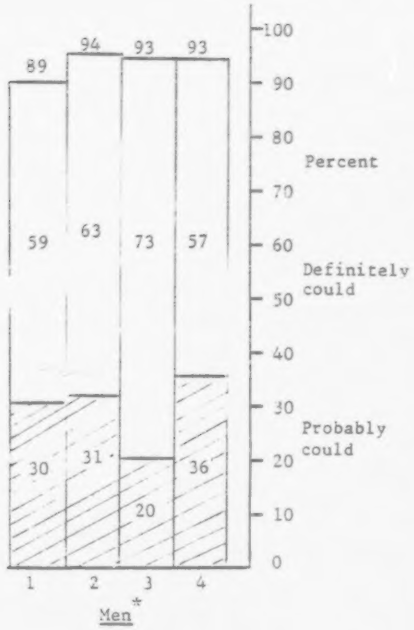


Fig. 4.30
Percent who think they could run their operations alone if something happened to their spouse



doing at least occasionally. The item in the men's questionnaire asked about wives' involvement in farm tasks, so we have two different, but presumably related measures of the same phenomenon. The graph presents the average (mean) proportion for respondents in each relative involvement quartile. Interpreting this proportion, the reader should keep in mind that it represents primarily the range of task types that a woman is involved in (standardized by the number of listed tasks actually done on her operation). It is not a measure of the proportion of total farm work that the woman does, although logically the two concepts should be related.

In the figure, we see that the proportion of tasks done rises substantially across relative involvement groups, and does so for both men's and women's responses. On average, women in the lowest quartile report regular or occasional participation in less than 40 percent of the tasks done on their operations. Women in the highest quartile report being involved in an average of 67 percent of their operation's tasks. Men in the lowest involvement group reported that their wives did 41 percent of the different types of tasks done on their operations, while those at the opposite extreme said their wives were involved in 55 percent of the tasks at least occasionally.

The subsequent graph (Figure 4.32) presents a similar statistic--the proportion of different types of farm decisions actually faced by an operation in which the respondent helped to make the final choice. (As for the task data, these responses are based on a varied list of common management decisions faced by most operations, not on all the actual decisions a given operation might have faced. See Question 14 in the women's version and Question 10 in the men's version. Non-farm decisions such as items C, G, and I were excluded from the computation of the proportion.) In this case men's responses refer to their own involvement in final decisions. As in the preceding figure, we see a marked increase in the range of decision types for women as we move from the lowest to the highest relative involvement group. This contrasts with the graph for males, which shows that virtually all men are involved in all decision types regardless of involvement with programs or agencies. Taken together, the graphs for tasks and decisions provide clear evidence of an association between the extent of program and agency involvement and the breadth of farm women's work and managerial experience.

Similarly, we find a significant relationship between our involvement measure and the extent to which women are enmeshed in the financial affairs of their operations. Figure 4.33 shows a sizable increase across involvement quartiles in the percentage of women who reported that their names appeared on checks received for products sold. In Figures 4.34 through 4.36, we see another side of the financial measures examined above; here we present the proportion within each quartile who said they did not know their operation's net income for the previous year, its total worth, or its total debt. In each case, the proportion of "don't know's" drops significantly across the involvement scale. Compared to those in the fourth quartile, women in the lowest involvement level are from 15 to 28 percentage points more likely to say they do not know three of the most basic facts of their operation's financial position. A similar trend was found for men as well, but the degree of association is far less pronounced.

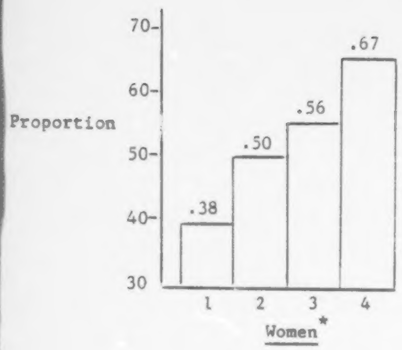
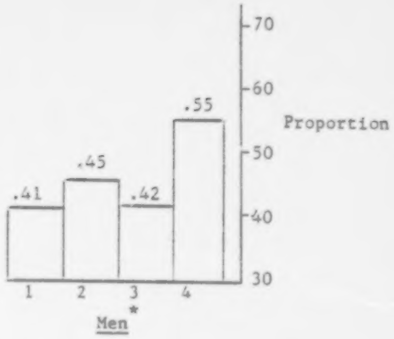


Fig. 4.31
Proportion of farm task types which respondent does at least occasionally (for men--proportion of task types their wives do at least occasionally) - (median)



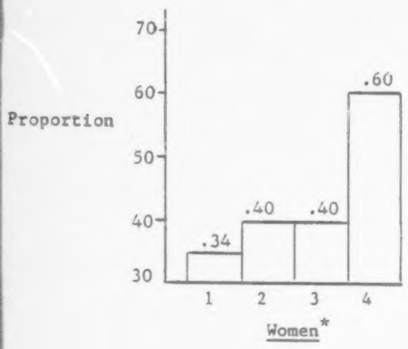
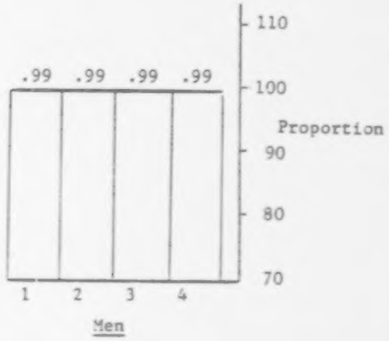


Fig. 4.32
Proportion of farm decision types in which respondent takes part in reaching final decisions (median)



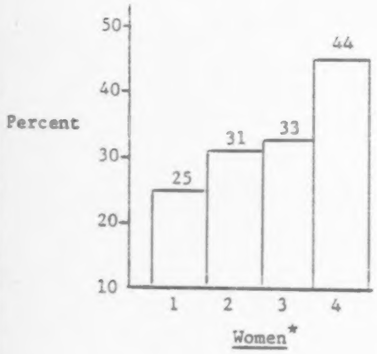
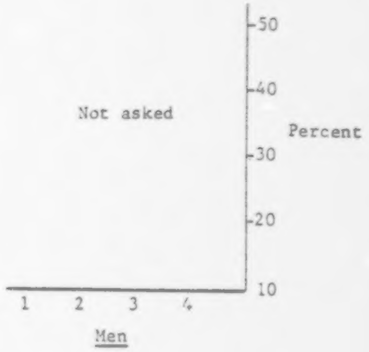


Fig. 4.33
Percent whose name appears on checks for products sold



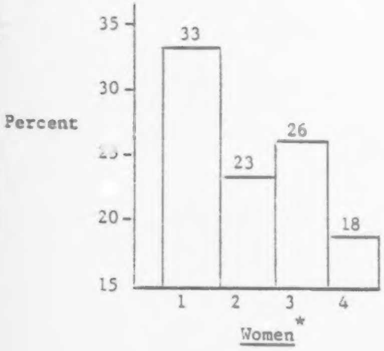
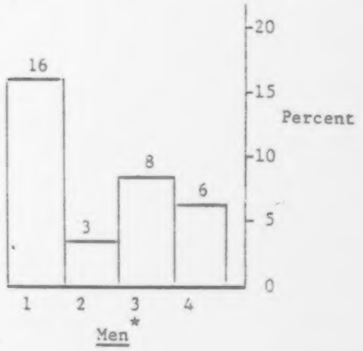


Fig. 4.34
Percent who don't know their operation's net income for 1979



Apart from respondents' roles on their operations, we also felt that program and agency involvement would be related to respondents' overall feelings about the quality or value of government programs. We expected that those who held low opinions of such programs would be least likely to pursue information about them or file applications to them. To explore this hypothesis, we used three items asking about respondents' satisfaction with "state or local government programs and services to farmers and ranchers," with "USDA programs and services to farmers and ranchers," and--for women only--with "USDA programs and services for farm women."

Our first glance at the data suggested that our expectations were confirmed; those in the lowest relative involvement quartile were generally 15 percentage points less likely to indicate that they were satisfied with the three types of programs. Much more relevant, however, is the fact that respondents in the lower involvement categories were much more likely to say that they did not know enough about the programs in question to be able to say whether or not they were satisfied with them. In fact, women in the lowest involvement group were from 29 to 39 percentage points more likely than those in the highest group to say they did not know about the programs (Figures 4.37 through 4.39). The greatest difference was observed for the item on USDA programs for farmers and ranchers: only 9 percent of these in the highest quartile gave a "don't know" response compared to nearly half (48 percent) of those in the lowest quartile. While it is true that most women (57 percent) said they did not know about USDA programs for farm women, the percentage varied sharply from 43 percent of the most involved group to 72 percent of those lowest on the involvement scale. Finally, when

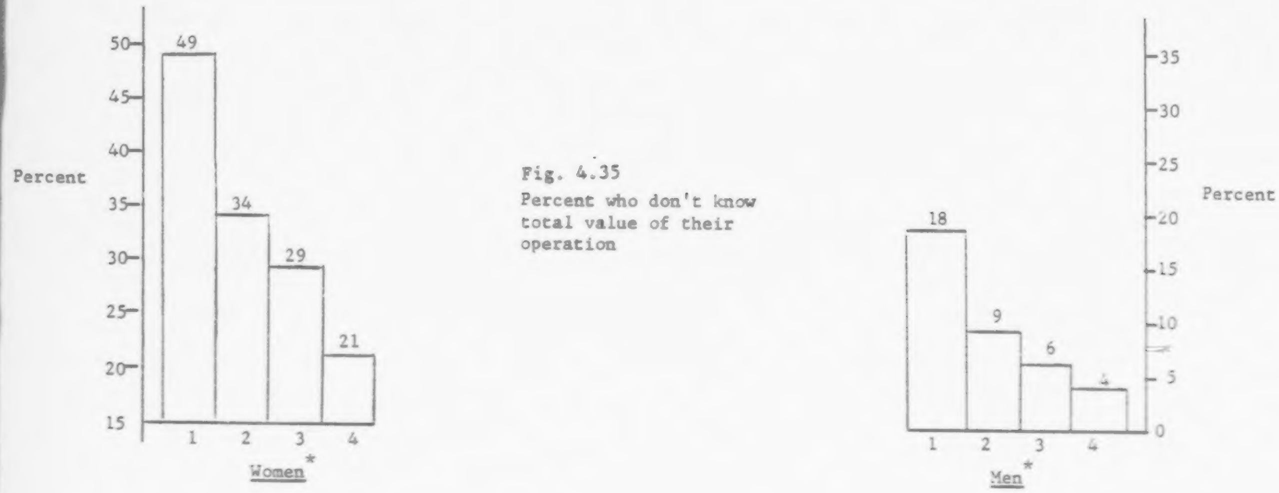


Fig. 4.35
Percent who don't know total value of their operation

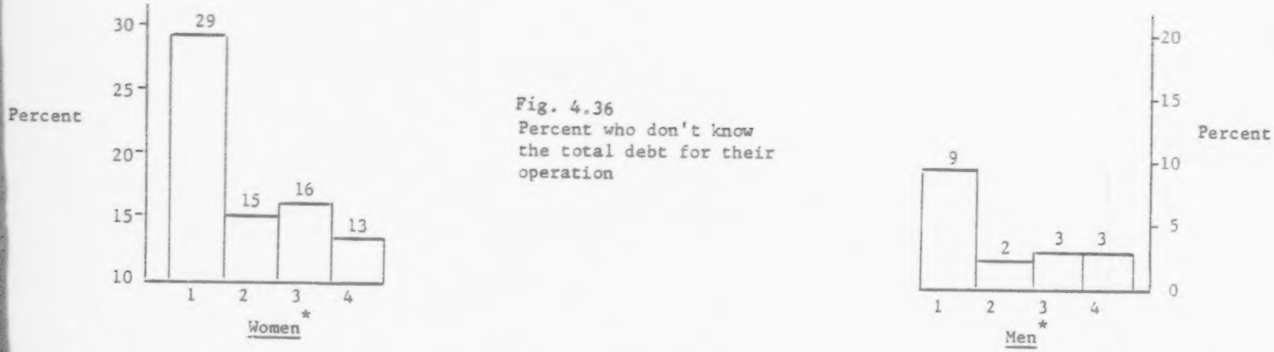


Fig. 4.36
Percent who don't know the total debt for their operation

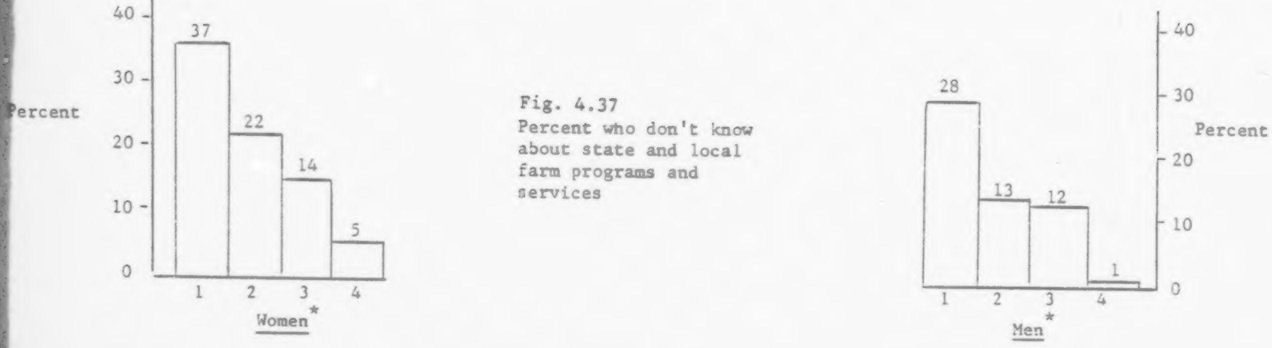


Fig. 4.37
Percent who don't know about state and local farm programs and services

"don't know" responses were excluded from the analysis, there were no systematic differences across involvement categories in the percentage who said they were satisfied or dissatisfied with the three types of programs.

We also examined reports of membership in agricultural organizations within each of our relative involvement quartiles. We expected a relationship between involvement and memberships for two reasons. First, we considered it likely that the same basic predisposition toward agricultural activism and involvement would lead to both organizational participation and program involvement. Second, we expected that the type of social and professional interaction experienced by members of agricultural organizations would foster the development of information and communications skills that facilitate program and agency involvement as we have measured it.

Women were counted as members if they indicated an affiliation with any of seven types of agricultural organizations, including marketing or farm supply cooperatives, general farm organizations, commodity producers associations, women's auxiliaries of such groups, or women-only groups oriented toward political or economic issues. Men were classified similarly, of course excluding consideration of the women's groups or auxiliaries (see Question 33 in the women's questionnaire and Question 28 in the men's questionnaire, Appendix C). The results, displayed in Figure 4.40, were even more dramatic than expected. Within the highest involvement levels, 70 percent of the women and 87 percent of the men claimed to be members of one or more of the organizations listed For both genders, the proportion drops steadily with decreases in involvement

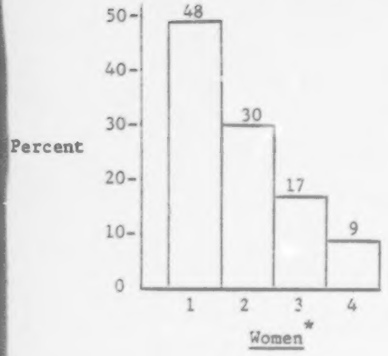
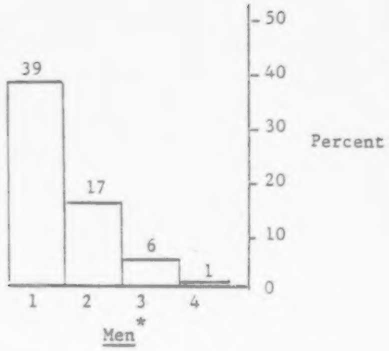


Fig. 4.38
Percent who don't know about USDA farm programs and services



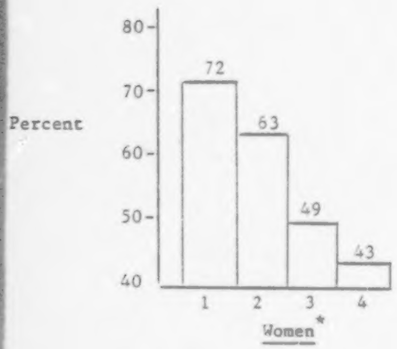
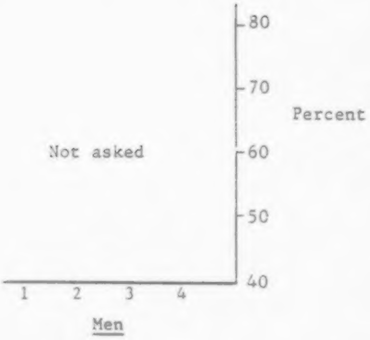


Fig. 4.39
Percent who don't know about USDA programs and services for farm women



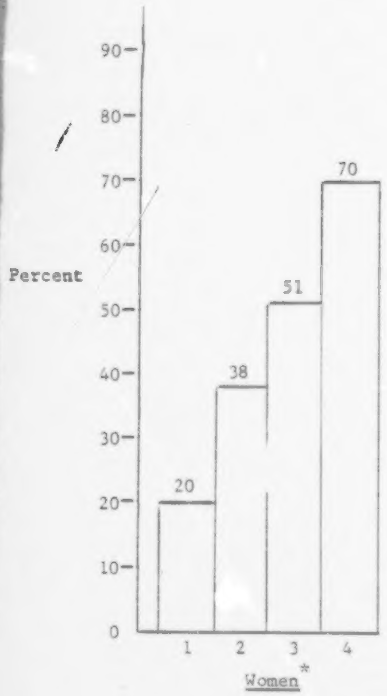
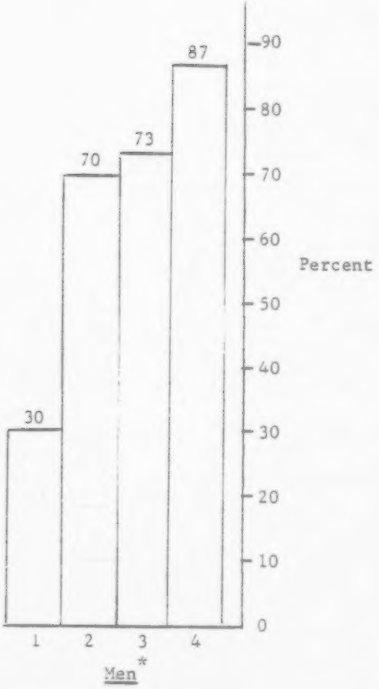


Fig. 4.40
Percent who are members of any type of agricultural organization



level: only 20 percent of women and 30 percent of men in the lowest quartile reported being members of farm organizations.

Finally, we considered one factor that cannot easily be classified as a personal trait, a farm characteristic, or a general farm involvement indicator: the relationship of respondents' program involvement to that of their spouses. Before examining the data, it seemed to us possible that the relationship between husbands' and wives' program involvement might be either of two basic types. On the one hand, it was conceivable that the kind of program and agency involvement we are studying is a "one-person job"; the more one partner became involved, the less reason the second would have to be involved as well. On the other hand, there is every reason to consider program involvement as a potentially expanding, joint activity for farm family members. In this case, involvement of one partner would tend to enhance--perhaps even to necessitate--the participation of the spouse.

In fact, the data revealed a strong positive relationship between the involvement levels of husbands and wives. The nature of this relationship is best illustrated using our household data file of about 500 married couples. Using the raw (uncollapsed) relative involvement scales, computed identically for husbands and wives, we found a Pearson correlation coefficient of .57 between them, indicating substantial similarity in the involvement levels of spouses. We thought at first that this moderately strong coefficient might be an overestimate of the actual relationship between husbands' and wive's involvement because of the way that the scales were constructed. Since both men's and women's scores were computed using survey items that referred to activity by "the operation," we suspected that the computational routine had built in artifactual correlation. However, when survey items referring to the operation were removed from both husbands' and wives' scale scores, the correlation was reduced only slightly, from .57 to .51. This finding strongly suggests that the correspondence in spouses' involvement levels is quite real, reflecting, for example, joint program applications or dealings with agency officials. Of course, there may still be a division of involvement labor among family members concerning particular activities, perhaps leading each partner to "specialize" in one type of activitiy or agency over another. In the broad sense, however, responsibility for program and agency involvement is more likely to be shared than divided within a family.

Give this relationship, how is it brought about? Do husbands primarily influence their wives or vice versa? Or is there some effect in both directions? Unfortunately, we do not have the data to answer the question definitively. Using the household file, however, we have found that husbands have, on average, relative involvement scores 11 points higher than their wives, a margin nearly identical to that found between the larger samples of men and women (see Table 4.16 above). In addition, Table 4.19 shows that, among the 497 husbands and wives, in only 20 percent of the cases did wives outscore their husbands, while in 75 percent of the cases the men sored higher than their wives (in 5 percent, the scores were equal). It thus seems reasonable to assume that in the great majority of cases the influence tends to run from husband to wife, rather than the other way around. Note that we are

TABLE 4.19

COMPARISON OF HUSBANDS' AND WIVES' RELATIVE PROGRAM INVOLVEMENT SCORES

(Percent)

Husband's score higher	75
Wife's score higher	20
Husband's and wife's score equal	5
Total	100
(N)	(497)

	Mean	Standard Deviation	Median
Husbands' scores	25.59	16.68	22.92
Wives' scores	14.47	11.82	11.83
Husband's score less wife's score	11.12	13.97	9.46

not implying in this conclusion that men necessarily take an active, self-conscious role in developing program involvement by their wives; in fact, the process is probably quite subtle and unstructured, and may be entirely unconscious. We are simply suggesting that women are more likely to develop high involvement profiles when they are in the company of more active and involved men, and that it is probably the husband who exerts the greater influence on the overall family involvement pattern.

We cannot duplicate this analysis exactly with the full sample of women because we cannot construct a full measure of their husbands' involvement levels. We can approximate it, however, by examining the percentage of respondents in each of the relative involvement quartiles who reported that their spouses had filed a program application or request to any of the three agencies during the past two or three years. These data are presented in the graphs of Figure 4.41.

The relationship graphed in Figure 4.41 is distinctly stronger for women than for men. Only 2 percent of the women in the lowest involvement quartile reported that their husbands had filed a program application (singly or jointly) to any of the programs studied. The proportion of women with applicant husbands rises steeply across involvement levels, reaching a peak of 73 percent within the highest quartile.

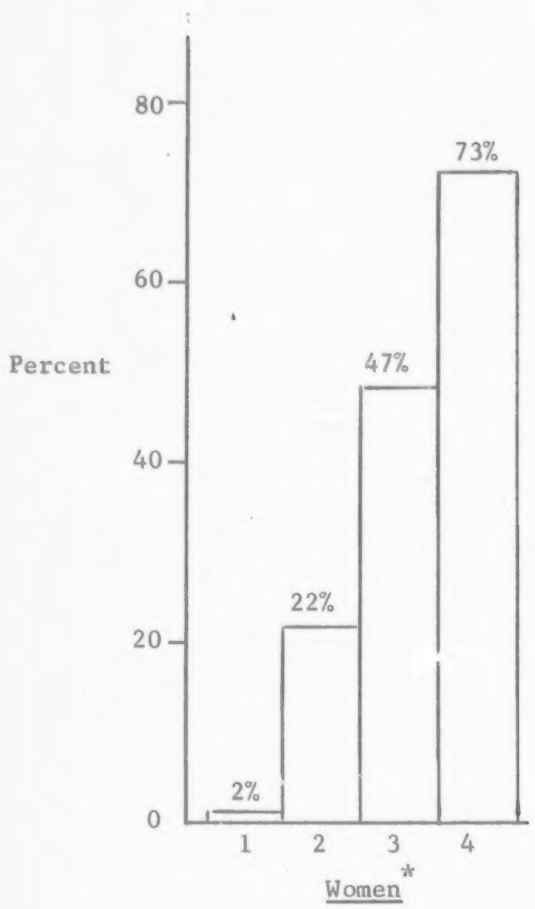
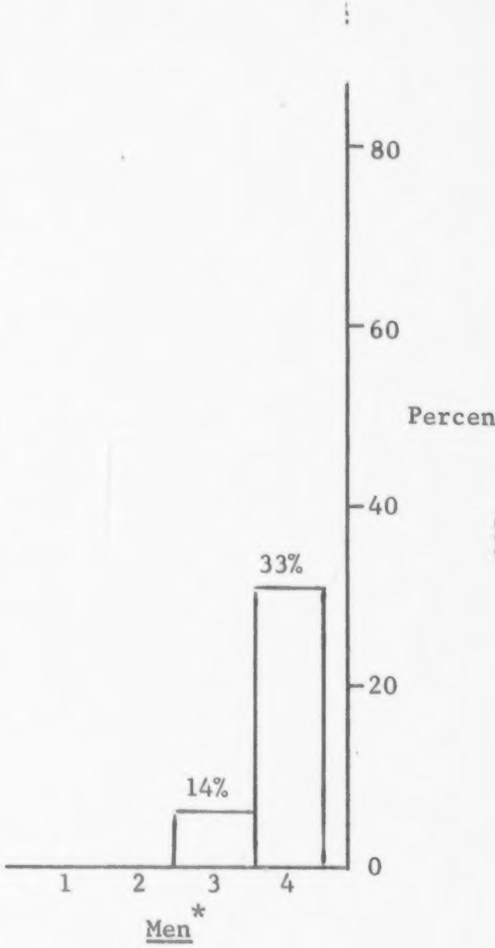


Fig. 4.41
Percent whose spouse had been named on a program application or request in the past two or three years



Interestingly, notwithstanding the conceptual differences between this simple indicator of husband's program application and the more elaborate relative involvement scale for the husband, we find that the two measures correlate equally well with the the women's involvement scale. We reported above a coefficient (Pearson's r) of .57 between the involvement scales of husbands and wives in the household sample. The computed coefficient between the metric (ungrouped) women's involvement scale and reports of husbands' applications is .55. Of course, this does not indicate that the two ways of measuring husbands' involvement are exactly equivalent, although they are strongly related (within the household dataset, the correlation between the wives' reports of husbands' applications and husbands' own involvement scales is .60). It does suggest, however, that the filing of program applications by husbands is one of the major components on which the overall husband-wife program involvement relationship is based. In particular, it suggests that women's reports of their husbands' applications may be viewed with some confidence as a reasonable substitute for the full husbands' involvement scale in more complex analyses of women's involvement levels using the entire 2,500-case sample of farm women.

Turning back to Figure 4.41, we note the considerable difference between the graph for men and that for women. Less than 1 percent of the men in the two lowest involvement quartiles reported that their wives had been party to program applications to the Price Support, Conservation Operations, or FmHA Loan programs during the last two or three years. Even in the third quartile, only 14 percent of the men reported that their wives were named on applications. In the highest level, about one-third of the men reported that their wives had been involved in an application. We believe that these data reinforce the explanation offered above that, in most cases, the program and agency involvement of farm women is more likely to be influenced by the activity levels of their husbands than vice versa. We have no doubt that the situation is reversed in some households, and that in still others husbands and wives may influence each other's activity levels equally. On average, however, husbands' orientations and behaviors tend to predominate.

Multivariate Analysis

To be sure, few of the findings portrayed in the graphs are very surprising. They generally agree with commonsense notions about the factors that promote or supress various kinds of participatory behavior. In the main, they conform to the results of similar research on social and political behavior among the general, nonfarm population. In fact, most of the unexpected findings concern the apparent absence of evidence that women who have potentially competing responsibilities, such as off-farm jobs or young children at home, are somehow distracted from program or agency involvement.

How can we summarize our results thus far? First, our initial program-by-program analysis disclosed that, for the four programs and agencies selected for study, farm women were on average less involved than men in virtually every aspect measured. Consequently, on our overall relative involvement scale, mean scores for women were significantly lower than for men. Nevertheless, we found considerable variability in relative involvement levels in both our male and female samples.

Our examination of individual program items could turn up no evidence that women respondents felt that they had been barred or discouraged from personal involvement in programs by USDA personnel. Nor could we detect any clear tendency among women who were involved with the specified programs or agencies to feel that they had been treated poorly. If women do not sense that discriminatory treatment affects their involvement levels, how, then, can we account for differences in involvement between men and women--or, indeed, for the varying degrees of involvement within the sample of women?

We have shown that, for both genders, program and agency involvement is related to a wide variety of personal traits, farm or ranch characteristics, and indicators of personal involvement in one's own operation or in agriculture generally. For both sexes, for example, the higher the respondent's involvement score, the more likely he or she is to be a member of one or more types of agricultural organizations. We assume that organizational affiliation influences program involvement (rather than the other way around), since members are more likely than nonmembers to share information about program features, eligibility requirements, application procedures, and so forth. It is easy to see that if memberships boost involvement levels, and if men are more likely than women to be members, then men as a group will have higher average involvement scores than women. Differences in involvement levels for men and women would be traceable to differences in their organizational memberships. We might imagine, however, that men and women were about equally likely to belong to agricultural organizations, but that the effect of belonging--the boost in involvement level provided by the organization--was greater for men than for women. In this case as well, the result would be higher average involvement levels for males as a group.

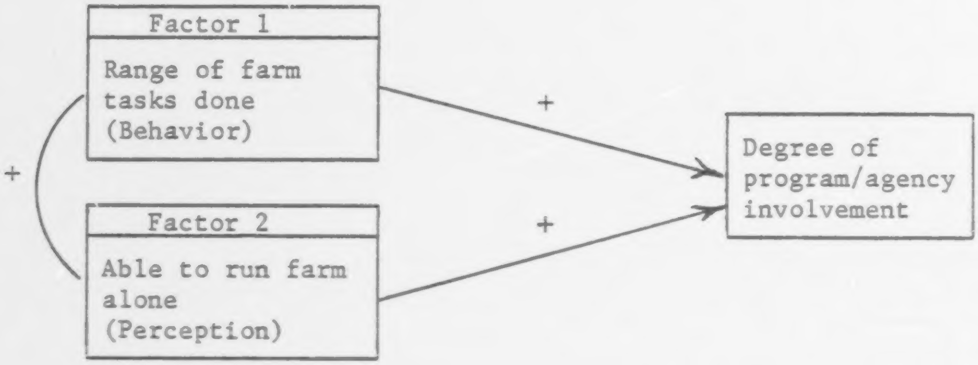
In the first instance, a difference in status (whether or not one is a member of a farm organization) gives rise to the difference in program and agency involvement. In the second instance, a difference in process (the structure and workings of the organizational experience for men and women) causes the involvement gap, and will do so even if men and women start out with the same status (are equally likely to belong to organizations). Of course, it is possible that differences in both status and process may operate simultaneously to produce involvement differentials.

In this simple example, we considered the effect of only a single factor (organizational membership) on involvement levels. Unquestionably, reality is a great deal more complex. For one thing, our graphical presentation showed that a large number of personal, farm, and farm involvement characteristics were related to program involvement. All of those items can be viewed plausibly as potential causes or boosters of involvement levels. At this stage, however, we are unable to say whether all of the graphed items exert independent causal influence on relative involvement scores. To better understand the overall processes that promote or supress program and agency involvement, we need to separate out the direct causal linkages from the incidental relationships. This step in the analysis can be clarified by a simple example.

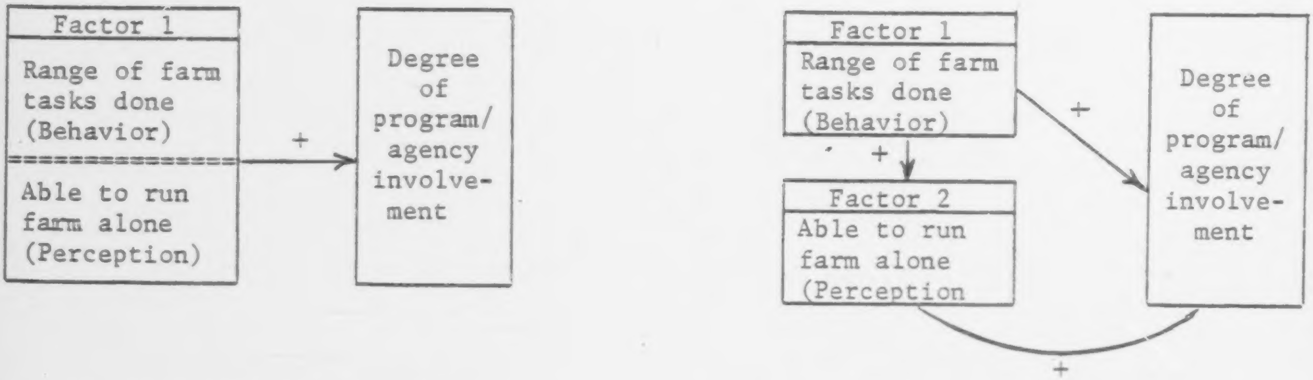
We saw above that program involvement was related to both the proportion (range) of her operation's tasks that a woman did, and to the perception by the woman that she could run the operation alone if something should happen to her spouse. Both of these relationships were positive. That is, the higher a woman's relative involvement level, the higher the proportion of farm tasks she reported doing, and the more likely she was to feel that she could run her operation herself. Conceivably, both of these factors--one a behavioral report, the other a perceptual measure--might have its own independent causal effect on program and agency involvement. This state of affairs can be represented by a diagram like that in Figure 4.42-A. An important implication of the model depicted in this figure is that a change in either one of the two factors would have an impact on relative program involvement levels, regardless of whether the other factor changed as well. That is, on average, we expect that women who take on a larger range of the tasks done on their operations will become more involved with USDA programs and agencies whether or not they change their beliefs about their ability to run their farms without their husbands. Conversely, if something happens to change a woman's perception about her ability to manage the enterprise alone, we expect a corresponding change in her relative program involvement regardless of whether she takes on a wider range of farm tasks.

There are many other plausible models that might be closer to reality and that also conform to the patterns of relationships observed in our survey data. Two examples are presented in Figure 4.42-B and 4.42-C. In part B, the model includes only one factor (which might be understood as "overall farm involvement"), within which the behavioral and perceptual components are inextricably intertwined. In this case, the two factors are so highly interrelated that it may be impossible to distinguish analytically between them. In a predictive model either of the two factors might be substituted for the other, since they both contain essentially the same information about the woman's relationship to her farm. Once one of the factors is included in the analytical model, the second would be redundant.

Fig. 4.42. Possible causal linkages between women's farm involvement and program or agency involvement


Factor 1
Range of farm tasks done (Behavior)
+
+
Factor 2
Able to run farm alone (Perception)
+
Degree of program/agency involvement

A. Both farm involvement factors exert independent positive influence upon program/agency involvement


Factor 1
Range of farm tasks done (Behavior)
Able to run farm alone (Perception)
+
Degree of program/agency involvement
Factor 1
Range of farm tasks done (Behavior)
+
+
Factor 2
Able to run farm alone (Perception
Degree of program/agency involvement
+

B. Two farm involvement measures are part of a single underlying factor ("overall farm involvement") which affects program/agency involvement

C. Involvement in farm tasks affects both R's perception of ability to run farm alone and program/agency involvement linkage from perception to program involvement is spurious.

+ (-) Unanalyzed relationship

+ (-) → Causal process

+ Positive relationship or influence

- Negative relationship

Figure 4.42-C shows yet a third possibility. Again in this diagram the two factors are considered to have distinct properties of their own and are not simply reflections of the same underlying dimension. However, in contrast to the model in part B, this representation shows farm task involvement to be the crucial factor that affects both perceptions and program involvement, and thereby creates an artificial or spurious positive relationship between the latter two indicators. In this case we expect program involvement to change in accordance with a shift in women's task involvement, but we would not expect it to change as a result solely of a shift in the woman's belief in her ability to manage her farm. Of course, if the change in perception came about as a result of change in her farm task performance, then we would expect a change in program involvement only because of the causal linkage from the task involvement measure.

In fact, all three of these hypothetical models (and many more variations besides) are consistent with the observed relationships in our data. As more and more potential causal factors are considered, model building complicates rapidly. While it is desirable in the long run to be able to identify which one model best fits reality, to do so would require considerably more data than can be obtained from a single survey. In the remainder of this chapter we set ourselves the task of trying to establish which of the forty or so survey items exert direct influence on program and agency involvement, leaving for the future the much more difficult task of specifying the interrelationships among the causal factors. To us, this task takes precedence, because it will allow an initial assessment of the likelihood that the observed differences in men's and women's program involvement levels might be reduced or eliminated.

To begin to address the question of which factors have significant causal effects on program involvement, we must move beyond the bivariate analysis represented by our graphs to multivariate analysis techniques. With the aid of some reasonable simplifying assumptions, we will construct a basic model of the processes which we believe directly affect involvement levels. Given the model assumptions, the multivariate methods will allow us to estimate both the existence and strength of the effects on involvement of each hypothesized causal factor. We can then use the estimates provided by the model to help us to envision the extent of change expected in involvement levels which would be associated with changes in the causal factors.

Ideally, we would like to be able to develop identically specified models to explain relative involvement levels of both men and women. Only by comparing parallel models can we fully compare the structures (combinations of processes) that influence program involvement for the two genders. Unfortunately, it was not always possible (nor was it always desirable) to collect identical data for the two sexes. As shown in the series of graphs, some items that are clearly related to involvement among women were not measured for men.

It is important to keep in mind, however, that decisions about which survey items would be omitted for male respondents were based largely on a priori assumptions about differences in the causal processes (structures) between men and women. If, for example, virtually every male respondent considers himself to be one of the main operators of his farm, then there is no reason to ask the question. Among men, there cannot possibly be an ordinal relationship between the self-perception as a main operator and the respondent's involvement level. Similarly, if nearly all males are assumed to perform all of the farm tasks relevant to their operations, task involvement cannot be related to program involvement.

Given the assumed differences between the sexes in the overall structure governing program involvement, we are still able to construct a basic explanatory model for men. Since several of the explanatory factors will be common to both men's and women's models, we will be able to draw gender comparisons with respect to both status and process indicators of those factors.

Predictive Models of Program and Agency Involvement

Our goal is to arrive at a simple and reasonably believable mathematical model which, given certain simplifying assumptions, clarifies the impact of respondents' characteristics on their involvement levels. Such a model might be constructed in a great variety of ways. We have chosen ordinary least squares (OLS) regression as the basis for our predictive models primarily because it allows straightforward interpretation and is relatively robust with respect to minor violations of its mathematical assumptions.

The product of the regression analysis is a (linear additive) prediction equation in which respondents' scores on a "dependent variable"--in this case relative program and agency involvement scores--are expressed as a sum of the contributions of a set of independent (or predictor) variables, the series of respondent characteristics discussed in the graphs above. In other words, a farm woman's program involvement score is interpreted as the result of several processes operating at the same time: her memberships in farm organizations, her general knowledge about USDA programs, her degree of involvement in the work and decision-making for her operation, and so on. The values of regression coefficients associated with each respondent characteristic included in the model express the direct contribution to the total involvement score made by each of the predictor variables _with all the other characteristics held constant_. For example, if the regression coefficient for our measure of membership in farm organizations is equal to 3 points, then we would expect that, if the model accurately reflects reality, respondents' involvement scores would increase an average of 3 points for each additional type of farm organization they belonged to, even if all other respondent characteristics remained the same.

With separate regression models constructed for men and women, we can compare the coefficients between genders on identical predictors. The extent to which they differ will help us to determine whether men and women receive differential boosts in their involvement levels from the same factors. Furthermore, by comparing initial values (status measures) on predictor variables, we can explore the issue of whether changes in women's background or farm involvement measures would be likely to eliminate or at least reduce the observed differences between the sexes in relative program involvement.

Table 4.20 lists the independent variables that were tested for direct effects on relative program involvement, including a brief description of each item, the means and standard deviations for the male and female samples, and the simple (zero order) correlations with the dependent variable. Detailed descriptions of how each variable was constructed are included in Appendix F. In Table 4.21 are displayed the parameter estimates for those variables found to have statistically significant direct effects (or effects of borderline significance)

TABLE 4.20

SPECIFIED PREDICTOR VARIABLES FOR PROGRAM INVOLVEMENT REGRESSION MODELS

Variable	Mean	Standard Deviation	Simple Correlation with Dependent Variable	Valid N
Women's Equation				
Husband's involvement in program applications	.36	.48	.55	2,509
Personal Background Factors				
Education level	3.56	1.48	.23	2,499
Elected or appointed to public office	.08	.28	.19	2,509
Member of community (nonfarm) organizations	.61	.49	.26	2,509
Financial independence	.84	.93	.16	2,509
Farm Involvement				
Membership in farm organizations	.61	.87	.43	2,509
Proportion of farm tasks R does	.53	.26	.29	2,509
Proportion of farm decisions R helped make	.48	.37	.17	2,509
R's name is on deed or title to owned land	.77	.42	.11	2,509
R's name is on rental contract for rented land	.10	.31	.19	2,509
R's name is on checks received for products sold	.33	.47	.15	2,509
Proportion of R's life spent on farm or ranch	.63	.30	.13	2,480
Does R consider self one of main operators?	.55	.50	.23	2,509
Could R run operation alone if something happened to spouse?	.57	.50	.18	2,509
Number of farm financial questions R was not able to answer	.76	1.00	-.20	2,509
Number of farm program areas R did not know enough about to judge own satisfaction	.45	.74	-.33	2,509

TABLE 4.20--Continued

Variable	Mean	Standard Deviation	Simple Correlation with Dependent Variable[a]	Valid N
Women's Equation (Continued)				
Farm Characteristics				
Total farm/ranch acreage	568	1,445	.15	2,422
Total cropland acreage	247	447	.21	2,334
Operation produces soybeans	.21	.41	.10	2,509
Operation produces winter wheat ..	.18	.38	.13	2,509
Number of beef cattle on hand	61	309	.07	2,445
Number of dairy cattle on hand ...	14	104	.05	2,480
Percent of gross sales from crops.	47	44	.04 (p=.10)	2,253
Operation produces both crop and livestock for sale	.24	.43	.19	2,509
Number of family members beside spouse who regularly do farm work	1.62	1.28	.12	2,509
Someone besides R and spouse regularly helps to make final decisions for the operation	.26	.44	.08	2,509
1979 net farm income .(thousands).	$10.683	$ 22.928	.13	2,315
Total farm value .....(thousands).	$252.618	$398.696	.15	2,381
Total farm debt .....(thousands).	$43.583	$118.374	.26	2,385
Men's Equation				
Personal Background Factors				
Education level	3.44	1.78	.21	569
Member of community (nonfarm) organization	.57	.50	.32	569
Farm Involvement				
Membership in farm organizations .	1.16	1.15	.46	569
Proportion of R's life spent on farm or ranch	.71	.29	.17	564
Number of farm financial questions R was not able to answer	.22	.56	-.17	569
Number of farm program areas R did not know enough about to judge own satisfaction	.29	.62	-.36	569

TABLE 4.20--Continued

Variable	Mean	Standard Deviation	Simple Correlation with Dependent Variable[a]	Valid N
Men's Equation (Continued)				
Farm Characteristics				
Total farm acreage	567	1,139	.37	555
Total cropland acreage	278	511	.43	564
Operation produces beans	.24	.43	.08 (p=.07)	569
Operation produces winter wheat .	.20	.40	.17	569
Number of beef cattle on hand ...	59	178	.19	565
Number of dairy cattle on hand ...	11	51	.08 (p=.05)	564
Number of hogs/pigs on hand	49	218	.14	566
Percent of gross sales from crops	48	43	.19	553
Operation produces both crops and livestock for sale	.25	.44	.20	569
Percent of farm tasks wife does at least occasionally	.48	.29	.13	569
Someone else besides R and spouse regularly helps to make farm decisions	.22	.41	.19	569
1979 net farm income (thousands).	$13.502	$38.008	.06 (p=.16)	521
Total farm value ..... (thousands).	$336.444	$529.710	.27	549
Total farm debt ...... (thousands).	$69.730	$156.855	.35	551

[a] All simple correlations are statistically significant at $p \overline{<} .01$ unless otherwise noted.

in each of the regression models. A few important considerations should be kept in mind in interpreting these results. First, as pointed out in Chapter 1, the sample of men is not independent of the sample of women. Men were interviewed (if present) on a subsample of operations selected primarily for the survey of women. Of the 569 males, 497 (87 percent) are husbands of women who were interviewed; most of the remainder did not have wives present. The absence of complete independence of the sample raises to an unknown extent the probability that results for men and women will be similar (about 500 of them live and work on the same operations). We think the threat to comparability of men's and women's data is minimal, however--in part because the women's sample is so much larger than the men's (i.e., the wives of the males compose only one-fifth of the women's sample), and also because we found no significant differences in the response patterns between the 497 wives and the 2,012 other respondents in the female sample.

The second point follows from the vast difference in size of the male and female samples. The relative precision of statistical estimates from a 2,500-case sample is a great deal higher than from a sample of 500. Since statistical significance is in part a function of sample size, it will be possible to detect significant effects of a much smaller magnitude with the women's sample than with the men's. While differences in the sensitivity of the analyses present a potential problem for the comparability of regression models, it did not emerge as a practical problem in this case.

Finally, the reader should be aware that the regression models were estimated using an OLS regression computer program which, while highly sophisticated, computes measures of sampling error based on simple random sample (SRS) assumptions. Since the sampling design actually

TABLE 4.21

MULTIPLE REGRESSION STATISTICS FOR PROGRAM/AGENCY INVOLVEMENT MODELS

Women's Equation

Goodness of fit measures (excludes "borderline" effects)
Multiple correlation coefficient (R) = .74
Coefficient of determination (R^2) = .55
F for equation = 147.263; Significance level < .0001

Parameter estimates ($P \leq .01$)

Variable	Slope	Standard Error	Beta	Significance
Husband's program application	10.59	0.39	.42	<.0001
Personal Background Factors				
Member community organizations ..	2.88	0.38	.12	<.0001
Education level	0.60	0.13	.07	<.0001
Financial independence	1.03	0.20	.08	<.0001
Elected to public office	2.82	0.65	.07	<.0001
Farm Involvement				
Member farm organizations	2.88	0.22	.21	<.0001
Proportion of farm tasks done ...	4.32	0.88	.09	<.0001
Lacks general program knowledge .	-1.59	0.26	-.10	<.0001
Considers self one of main operators	1.76	0.42	.07	<.0001
Proportion of farm decisions R shares	1.87	0.58	.06	.001
Proportion of life spent on farm	2.09	0.62	.05	<.001
R's name on contract for rented land	1.93	0.60	.05	.001
R's name on checks for products sold	1.00	0.40	.04	.01
R's name on deed for owned land .	1.07	0.43	.04	.01
R could run farm alone if something happened to spouse ..	0.98	0.37	.04	< .01
Farm Characteristics				
Total farm debt	0.009	0.001	.09	<.0001
Total acreage	0.0003	0.0001	.04	.01
Constant term	-3.44	0.84		<.0001

TABLE 4.21--Continued

Women's Equation (Continued)

Effects of borderline significance ($.01 < p < .05$)

Variable	Slope	Standard Error	Beta	Significance
Operation produces soybeans	1.02	0.44	.03	.02

Men's Equation

Goodness-of-fit measures (excludes "borderline" effects)
Multiple correlation coefficient (R) = .67
Coefficient of determination (R^2) = .45
F for equation = 40.159; Significance level < .0001

Parameter estimates ($P \overline{<} .01$)

Variable	Slope	Standard Error	Beta	Significance
Personal Background Factors				
Member community organizations ...	4.21	1.16	.13	<.001
Education level	1.04	0.33	.11	.002
Farm Involvement				
Member farm organizations	3.33	0.53	.24	<.001
Lacks general program knowledge ..	-4.97	0.92	-.19	.001
Proportion of life spent on farm .	5.64	1.99	.10	.005
Lacks knowledge of financial data for own farm	-2.55	0.97	-.09	.009
Farm Characteristics				
Total cropland acreage	0.005	0.0016	.16	.001
Total farm debt	0.014	0.0038	.14	<.001
Produces crops and livestock	3.29	1.27	.09	.009
Proportion of farm tasks done by R's wife	4.75	1.94	.08	.015
Constant term	6.58	2.28	--	.004
Effects of Borderline significance ($.01 < p < .05$)				
Total farm acreage	0.002	0.001	.11	.020
Net farm income	-0.033	0.015	-.08	.028

employed was more complex (stratified, multi-stage, area-probability design using disproportionate selection probabilities), these assumptions are, strictly speaking, inappropriate. Since, on balance, the design used is probably somewhat less efficient overall than an SRS design, the effect of using inappropriate computational assumptions is the underestimation of the variability of sample estimates. The degree of underestimation is likely to be quite negligible in the case of the large women's sample, and still reasonably small for the men's sample. To guard against inferential error, however, we chose to use more stringent statistical criteria for the significance of individual coefficients and goodness-of-fit tests for both equations and incremental additions of variables to equations (significance probabilities of less than or equal to .01, rather than the customary .05). Although we will present regression coefficients for predictor variables whose significance probabilities were computed by our program as .05 or lower, those with values between .05 and .01 should be considered borderline cases and should be interpreted with caution.

The equations were built using a true stepwise inclusion algorithm. This method constructs an explanatory model by adding predictor variables one at a time, beginning with the predictor variable that by itself exhibits the strongest relationship with the dependent variable--program and agency involvement. After the first variable is entered, the program automatically examines the remaining predictor variables that are not yet included in the equation and selects for inclusion the independent variable that adds the greatest degree of additional predictive power beyond that achieved by the variables already selected. The program continues to select additional variables into the equation based on their incremental addition to predictive power until the power added is statistically negligible. In addition, after each variable is entered into the equation, the program scans all variables that are in the equation and removes from the model any variables that, given the configuration of the equation at any step, fail to add significantly to the predictive power of the model.

Through this iteration process, the stepwise method selects from a large pool of potential predictor variables the subset that constitutes the best linear combination for explaining the variation in the dependent variable. Whether or not the resulting model accurately represents reality is open to question. In the absence of clearly defined theory about the causes of program involvement, the method uses statistical criteria to help us identify the factors that exert independent influence on involvement levels, and does so with a minimum of restrictive assumptions about the causal interrelationships among the predictors. In that sense, the models we present here are starting points with primarily heuristic value, and are subject to revision by other researchers willing to make different assumptions about the linkage among predictor variables.

Turning back to Table 4.21, we examine first the goodness-of-fit statistics for each equation as a whole. The complete equations included 17 significant effects (plus a significant constant term) and one borderline effect in the women's model, and 10 significant effects (plus a constant) and 2 borderline effects in the men's model. The coefficients of determination (R^2)for the two equations are .55 and .45 for the women's and men's models respectively. These values indicate the proportion of the total variation in the involvement measures that is "explained" or accounted for by the significant predictor variables in each equation. (The R^2 values increase by neglible amounts if borderline variables are included in the equations.)

Although in commonsense terms it may seem as though our models fail to account for a great deal of the variation in the two involvement measures, in fact the two equations must be judged quite successful by conventional social and behavioral research standards. No doubt some of the unexplained or residual variance in the involvement measures could be accounted for by additional predictor variables that were not measured in our survey instruments and thus cannot be included in a mathematical model. We lack, for example, a measure of respondents' general attitudes about federal government intervention in the economy. Most researchers would agree, however, that the bulk of the residual variance is likely to be due to "measurement error"--that is, imperfect conceptualization, operationalization, and measurement of respondents' true involvement levels. Of course, predictor variables are subject to these problems as well.

In Table 4.21, we have organized the presentation of significant effects along the same lines as our discussion of the bivariate relationships in the series of graphs. In both the men's and women's equations, the independent variables can be viewed as primarily personal or background characteristics, farm or enterprise characteristics, and indicators of the respondent's direct involvement in the day-to-day work and lifestyle of agriculture. In addition, in the women's equation, we include as a separate category the measure of husbands' program applications discussed above (pp. 165-7). We have explicitly omitted a measure of wife's program involvement in the men's equation in the belief that, on average, husbands' activity levels may affect wives' involvement with programs and agencies, but not vice versa.

Table 4.21 displays both unstandardized partial regression coefficients (slopes) and standardized coefficients (beta's). Estimated standard errors for the slopes and significance levels are also shown. The values of the slopes indicate the expected change in involvement score associated with a change of one unit in an independent (predictor) variable, assuming all other predictors are held constant. Because the independent variables were constructed identically for the men's and women's models and thus share the same metrics, it is legitimate to compare the slopes obtained for variables common to both equations. However, since the independent variables within each equation were created using a considerable variety of metrics or scales, they are not useful for comparing the relative sizes of effects within either men's or women's models. Standardized coefficients (beta's), on the other hand, express the impact of each variable in terms of a common metric (the standard deviation unit) within each sample, and thus provide a means of comparing the relative strength of predictor variables in a given equation. Since the means and standard deviations for many predictors differ significantly for men and women, beta's cannot generally be compared across equations.

Looking first at the women's model, we are immediately struck by the magnitude of the regression coefficients for the indicator of husbands' involvement level. The standardized coefficient (beta) of .42 is twice that for any other variable in the equation. Its unstandardized coefficient (slope) indicates that controlling for other factors (i.e., asuming that women were equal on all other factors in the equation), the 36 percent of women whose husbands submitted an application to one of the three programs under study have program involvement scores over 10 points higher on average than women whose husbands did not submit applications (or who do not have husbands). Keeping in mind the nature and limitations of the program involvement measure that we have constructed as the dependent variable, it is difficult to escape the conclusion that the behavior of their husbands is the single most important factor influencing women's involvement levels.

A variety of personal background variables and indicators of general involvement in farming were also found to have significant regression coefficients in the women's equation. The second strongest effect in the model is connected with the measure of memberships in different types of agricultural organizations. Its beta weight is .21; although only half the beta for husband's involvement, it is nearly twice as large as the coefficient for any of the remaining variables. Its slope is just under three points, indicating that, on average, women's relative involvement scores increase by about 3 points for each additional type of farm or ranch organization (excluding women-only groups) of which they personally are members.

Significant coefficients were found for nine additional measures of women's overall involvement in their farms, including the range of farm task involvement, the extent of participation in decision-making for the operation, inclusion by name in contracts for rented land and on deeds for owned land, and named inclusion as payee on checks received for farm products sold. Also in this general category are significant effects due to long-term farm experience (measured by the proportion of the respondents' lifetime spent on a farm or ranch), our indicator of whether or not a woman considers herself to be one of the principal operators for her enterprise, and the perception of whether she could run the operation if something happened to her spouse. A final item in this category exhibited a significant negative effect on relative program involvement. This measure was computed as a count of the number of times (zero, one or two) a woman reported that she did not know enough about farm programs (state programs or Federal USDA programs) to be able to say whether she was satisfied or dissatisfied with them. On average, relative involvement scores were over one and one-half points lower for each additional program area a woman did not know about.

All four of the personal background measures tested in the regression analysis proved to have significant coefficients. Comparing the beta weights, we see that their direct effects are modest compared with such variables as husband's involvement level or membership in agricultural organizations. They are roughly on a par with most of the farm involvement measures discussed above. Of the four, membership in nonfarm community organizations has the largest standardized coefficient (beta = .08); it is followed by the measure of political experience as an elected or appointed official (beta = .06). (However, sampling error--even with over 2,000 cases in the analysis--prevents us from concluding that any one of these effects is actually larger than the others in the entire population.)

The interpretation of these effects deserves comment. The direct effect from educational level to involvement level seems perfectly straightforward; even if women were identical in all other respects, those with more formal education would tend to have an edge in the kinds of resources and skills that foster slightly higher activity and involvement levels. Membership in community organizations is also a way to develop skills and information networks that give members advantages over nonmembers who may be equal in every other way. The same sorts of processes benefit women who have served in political positions.

Interpreting the independent effect from the financial independence indicator is not quite as easy. On the one hand, women who prefer some degree of personal autonomy in financial arrangements by having accounts, loans, or credit in their own names may be treated differently in the eligibility guidelines and procedures for participating in certain programs (e.g., FmHA loans), thereby requiring active involvement in the application process. Moreover, by establishing independent credit records or histories, they may be viewed as better risks in the competition for loan funds, as well as having satisfied particular eligibility requirements for direct participation.

On the other hand, there is an important sense in which this measure--and the indicators of community participation and political involvement as well--serve a second function, as surrogates for other personal characteristics not measured directly in this survey. We expect that these variables would be positively correlated with a number of psychological and attitudinal factors, for example, general sociability or outgoingness, personal efficacy, independence of mind, a sense of social responsibility, and so on. We suspect that these unmeasured variables would be related to a number of the farm involvement items as well. Although we cannot include these psychological factors in our analysis, it should be clear that our model includes a number of items that serve as partial substitutes for such concepts. Despite our inability to discuss psychological effects in direct, quantitative terms, our models do not ignore them entirely.

One of the more interesting features of the women's equation is the comparative absence (relative to the men's equation) of direct effects on program involvement levels from farm or ranch characteristics.

Only two items, the measures of total farm debt and total acreage, were found to have a significant coefficients at the designated alpha level of .01. One other farm characteristic, the dummy variable indicating that the farm produces soybeans, had a small coefficient of borderline statistical significance.

We believe that the effect from farm debt to women's involvement level should be viewed with caution. There is some reason to question whether the debt-level indicator is in fact a legitimate independent variable that influences program involvement, rather than (at least in part) a dependent variable, which is itself affected by respondent's pursuit of government programs, some of which are for loans. On balance, we believe that the causal influence from debt level to program involvement predominates. Government loan programs are only one of a great many sources of financing, and the great majority of our respondents indicated that they preferred to deal with private sources. Also, while our relative involvement scale includes some components reflecting pursuit of government loans, it is by no means dominated by those measures. Thus, while our OLS regression analysis may be overestimating the effect of debt on involvement, we doubt that this specification is entirely inappropriate.

Assuming the specification is justifiable, the question remains why, other things being equal, greater farm debt should result in greater activity or involvement levels among women? The answer lies in the interpretation one places on the debt size measure itself. Our sense is that, on average, greater farm debt is associated with a particular approach by the operator family toward production and marketing goals as well as management practices. Generally speaking, greater debt loads are associated with large and/or expanding operations, and with those which are modernizing or adopting new technologies. It is true, however, that families who suffer economic setbacks from natural disasters or market disturbances generally find it advisable (if not unavoidable) to arrange financing of their recovery over an extended period. It is likely that either of these situations will give rise to a sense of urgency or commitment within the family to the success of the enterprise, leading in turn to the use of problem-solving tools and forms of management assistance that were previously ignored. In such cases, greater involvement of farm women with USDA programs and agencies is certainly a plausible outcome. The observed effect is not a trivial one: controlling for other variables in the equation, we expect that each additional $10,000 in debt will result, on average, in an additional 10 points on the relative involvement scale.

The small positive coefficient from total acreage to relative program involvement indicates that overall size of operation does exert some direct influence upon women's participation levels. Aside from the debt variable, no other farm size measure was found to have a significant partial effect. However, we cannot ignore the possibility of indirect influence from farm size to women's involvement. As we will see below, the importance of the size measures is much greater in the men's prediction equation than in the women's. Wives' involvement levels are so strongly influenced by their husbands' activity that we would expect the effect of farm size to be transmitted through (mediated by) the husbands' involvement variable. If so, removal of the husbands' activity variable from the women's equation should allow the indirect effect from farm size to emerge.

In fact, reestimating the equation with the husbands' activity variable has rather little effect on the individual coefficients presented in Table 4.21. (We note, however, that the value of R^2 drops from .55 to .41, a substantial of explanatory power for the equation as a whole.) Although the beta weight for the total farm debt increases from .09

to .14, that for total acreage increases only from .04 to .06. Instead, the most noticeable changes involve coefficients for the general program unawareness measure (beta changes from -.09 to -.17), and the inclusion in the equation of significant effects from two product indicators (the dummy variables identifying winter wheat producers and operations with significant sales from both crops and livestock), and the measure of the number of family members who contribute farm work. This pattern suggests that the bulk of the impact of husbands upon their wives' involvement is not simply the mediation of the farm size effect but rather in the reduction of the importance of the direct effects of her own lack of awareness about government programs. However, since the husbands' activity measure in the women's equation is not identical to the dependent variable in the men's equation, we would not want to drive these conclusions too hard.

The regression equation for men evinces both similarities and sharp contrasts with the model for women. Based on a priori assumptions, the indicator of wife's program involvement was not included as a hypothetical causal factor in the men's involvement equation. As was true for the women's sample, personal and background characteristics as well as measures of general involvement in farming proved to have significant coefficients for men. Unlike the situation with the women's model, farm or ranch characteristics appear to be quite influential in determining men's program and agency involvement scores.

Parallelling the findings for women, membership in agricultural organizations was identified as one of the single most important factors influencing men's involvement levels. Significant coefficients were also found for our measure of general awareness of state and federal programs. As for women respondents, men who indicated that they did not know enough about state and/or federal farm programs to say whether they were satisfied or dissatisfied with them had, on average, significantly lower relative involvement scores than those who knew enough to express an opinion.

Also similar to the women's results, we found a significant direct effect on men's involvement levels from the measure of long-term experience in agriculture (the proportion of the respondent's life spent on a farm or ranch). It is important to keep in mind that this variable is not simply a measure of longevity in the business of farming, although it is quite strongly related to the total number of years the respondent has spent on a farm or ranch. Instead, the construction of this measure highlights the extent to which farming has dominated the respondent's life or career, and is thus a component of the respondent's overall commitment to agriculture as a profession. Our findings indicate that among males who are equal in all other respects those who have spent their entire lives in farming have average program involvement scores almost 3 points higher than those who have spent only half their lives on a farm or ranch.

Table 4.21 shows that our analysis revealed one farm involvement measure that had a significant partial coefficient in the men's equation but did not emerge as significant in the women's model--the degree of respondents' unawareness of the financial status of their operations. This construct sums the occurrence of "don't know" responses to questions about net farm income, total farm value, and total farm debt. The most obvious interpretation of the negative coefficient for this item is that men who pay less attention to the financial details of their operations are (ceteris paribus) less likely to report different types of program or agency involvement.

The financial awareness measure, however, may be particularly subject to measurement error resulting from the somewhat sensitive nature of the financial questions themselves. As we have pointed out elsewhere, some respondents may say that they do not know their net farm income, worth, or debt in order to avoid bluntly refusing to answer. If so, the number of "don't know's" will be inflated to an unknown extent, adversely affecting our ability to estimate the relationship between financial knowledge and program involvement. In all likelihood, such masked refusals lead to underestimation of the awareness-involvement linkage, as a result of some relatively high-involvement respondents feigning ignorance of financial data. In any case, the total number of "don't know's" recorded for males on the finance questions was small, suggesting that the degree of underestimation of this effect is probably very small as well.

As mentioned above, several of the farm involvement variables entered in the women's equation were omitted from the men's analysis. These items (e.g., men's task involvement, self-perception as one of the main operators, decision-making role, inclusion on deeds, rental contracts and checks for products sold) were excluded on the assumption that they would show no variance, and hence no covariance with the involvement measure. Indeed, we were so confident that nearly all males would answer these questions in the same way that they were not, except for the decision items, included in the questionnaire for men. Even the decision items were asked only to allow us to examine the extent of agreement between husbands' and wive's responses in the household sample.

Men's responses to the decision questions support our early expectations. Better than 99 percent of the males reported that they took some part in reaching final decisions on all farm matters queried.

On this basis, it seems reasonable to assume that similar results would have obtained for the questions about tasks, self-perceptions, names on deeds or checks, and so forth. At the same time, our findings of a direct negative effect from financial unawareness to program involvement (even in the face of the possible measurement error discussed above), clearly undermines the notion that men's program involvement is not influenced by their degree of involvement in the work and management of their operations. An obvious possibility is that, for men, the linkage between farm involvement and program involvement operates at a different level than that which we have observed for women. Although we cannot press the analysis any farther with the present data, we are inclined to believe that a more detailed study of the relationship between men's farm work and management roles and their program and agency involvement would reveal a much greater linkage than has been shown here.

Table 4.21 also shows that in the men's equation four measures of farm characteristics have significant partial regression coefficients. In addition, both of the borderline effects in the men's model are farm traits as well. These findings present a strong contrast to the women's results where, with the exception of two significant and one borderline effects, farm characteristics appeared to make no separate contribution to relative program involvement scores.

With a beta weight of .16, total acreage planted to crops is one of the strongest effects in the men's equation. Controlling for other variables, men's program involvement scores increase by about one-half point (.52) on average for each 100 cropland acres. Despite the strength and clarity of this finding, we hesitate to conclude that crop acreage is such a strong determinant of men's program involvement in general. As we have frequently pointed out, our dependent variable (relative program involvement) has been constructed from survey items that cover a somewhat narrow range of programs, at least one of which (the Price Support Program) is of interest only to crop producers (and in fact restricts eligibility to producers of specified crops). At the least, the reader should recognize the possibility that if the program involvement measure had been built in a different way, using different farm programs as the basis for the scale, cropland acreage might not have had the same strong direct effect that we have observed here.

The next largest coefficient among the measures of farm characteristics was found for the measure of total farm debt (also significant in the women's equation). Both the standardized and the unstandardized coefficients are larger for men than for women. The interpretation of this effect is subject to the same complications noted in our discussion of the women's model above: if farm debt is both a cause and a result of program involvement, then our analytic methods overestimate the one-way influence from debt size to involvement level.

The smaller magnitude of the farm debt coefficient in the women's equation suggested that this specification issue was of minor importance. The debt variable could be omitted from the women's model with virtually no effect on the other coefficients. In the men's equation, the observed effect is large enough to raise concern about whether or not the farm debt measure should be considered an independent variable affecting program involvement. By examining the individual correlation coefficients between farm debt and the separate components of the program involvement measure, we can determine whether the relationship between debt size and the involvement scale stems primarily or solely from the relationships with the loan program items within the scale. If so, we will be more inclined to view the farm debt measure as an outcome of loan program participation, rather than as an indicator of the operator's business and management style that affects involvement levels. If, however, farm debt also correlates with the Soil Conservation Service, Extension Service, and leadership items, we will feel more confident in our original specification and interpretation of this effect.

Table 4.22 presents a number of correlation coefficients between the debt measure and involvement scale component items for both loan programs and other programs or activities. In general, the relationships between debt size and loan program involvement are not especially large compared to other involvement measures. The correlations between debt size and program familiarity are roughly equal for all three programs studied, and those with attendance at Extension classes on production practices, farm management, and estate planning are as large as the correlation with loan applications to ASCS and FmHA. Finally, the relationships between the debt measure and the indicators of business contacts with the four agencies studied are all approximately equal. Thus, even if the loan programs were entirely eliminated from the program involvement scale, there would still be a subtantial relationship between that scale and the farm debt measure. These findings support our belief that the debt variable, like the other farm characteristic measures, tells us as much about the behavior and management styles of our respondents as about the operations themselves. Given these results, our concern about the possible specification error surrounding the debt measures is greatly reduced.

Turning back to Table 4.21, we note that two additional farm characteristics were found to have significant direct effects upon men's program involvement--diversity of product sales and wives' involvement

TABLE 4.22

CORRELATIONS BETWEEN TOTAL FARM DEBT AND COMPONENTS OF THE RELATIVE PROGRAM INVOLVEMENT SCALE

(Pearson product-moment correlation coefficients)

Involvement Scale	r
R has heard about programs:	
ASCS - Price support	.08
SCS - Conservation operations	.14
FmHA - Loan programs	.03 (ns)
R is "very" or "somewhat" familiar with programs:	
ASCS - Price support	.17
SCS - Conservation operations	.18
FmHA - Loan programs	.16
R has had business contact with agency personnel:	
ASCS personnel	.19
SCS personnel	.17
FmHA personnel	.22
Extension Service personnel	.22
R has applied to program:	
ASCS - Price support	.20
SCS - Conservation operations	.19
FmHA - Loan programs	.27
R has participated in Extension activities:	
Classes on production techniques	.22
Classes on farm management	.25
Classes on estate planning	.28
Four-H or youth activities	.13
Discussed operation problems with agent	.15
Obtained information on other USDA programs	.17
Leadership positions or experience:	
Extension service committee for local area	.09
Official USDA committee, task force or group	.13
State level committee or group	.20
R is willing to serve on such committees in future	.07 (ns)

in farm tasks. As described earlier, a product diversity measure was constructed by classifying operators into two groups: those whose gross sales came primarily (90 percent or more) from either crops or livestock, and those whose sales were from a more even mixture of crops and livestock products. We found that the 25 percent of males who reported more mixed product sales had program and agency involvement scores which averaged over 3 points higher than their counterparts, once all other factors were controlled.

The measure of wives' farm task involvement in the men's equation is derived from the men's responses to questions about their wives' work rather than from the wives' own responses. However, the very small differences between husbands' and wives' reports about her task involvement (see Chapter 2) suggests that this choice has little impact on the finding. Our estimate is that males who report that their wives are involved in all the tasks done on their operations are, other things being equal, nearly 5 points higher on the involvement index compared to men whose wives are not at all involved in the farm tasks we asked about (or who have no wives). Given the linear assumptions of the regression method, we expect proportional increases in men's involvement scores (up to a maximum of 4.75 points) depending upon the range of farm tasks their wives perform.

We detected two additional effects of borderline statistical significance, both from farm characteristic measures. Another size measure, total farm acreage, may have a significant direct effect beyond that accounted for by the cropland acreage measure already included in the model. We cannot interpret this effect with a great deal of confidence. In the first place, the crop acreage and total farm acreage variables are fairly strongly intercorrelated (r = .69) raising the likelihood that they may be measuring the same underlying size dimension. Under this interpretation, it would be unwise to make too much of the difference between the two acreage measures. The proper inference would be simply that those with larger operations participate more.

The correlation between these items is far from perfect, however, and is comfortably below the level at which regression estimates are known to become very unstable. Moreover, given the programs and agencies selected for study, we are inclined to expect that our involvement index would show greater relationships with measures of crop production than livestock production. This expectation is borne out by the greater magnitudes of the zero order correlation between the involvement scale and the crop acreage variable as compared to the total acreage measure or the indicators of livestock numbers. On balance, then, we suspect that the apparent difference in direct effects between the two acreage variables is worthy of note, given the construction of the dependent variable. That is, once cropland acreage and all the other included variables have explained all the variance in our involvement indicator that they can, the total acreage measure adds very little to the prediction equation. However, the very fact that the total acreage measure exhibits even a borderline independent effect upon this particular dependent variable suggests to us that overall farm size (regardless of the distinction between crop versus livestock production) is likely to be a significant factor influencing a wider range of program involvement behavior.

The remaining borderline effect is associated with our net farm income measure. Borderline statistical significance, in essence, means that we have considerable doubt that this variable would appear as a significant predictor of involvement in repeated similar samples.

Note that the observed coefficients are negative, indicating that controlling for other variables, program involvement levels fall slightly as net farm income rises. This is not an implausible finding; one can easily imagine that lower than average net incomes might provide powerful motives for higher levels of program or agency involvement, other things being equal. However, the negative result is a reversal of the sign of the zero-order correlation for the net income measure (see Table 4.20), and runs counter to the findings in our bivariate graphs (Figure 4.21) of an overall positive relationship between involvement and net income. One might put some intriguing interpretations on this negative partial coefficient. It might, for example, be a result of conscious outreach efforts by program or agency officials (especially those in FmHA and the Extension Service) attempting to bring smaller, lower income operators into greater contact with their offices and activities. The weakness of the findings forces us to be reluctant to reach any such conclusions without considerably greater evidence.

Comparison of Men's and Women's Equations

Of course, the most basic difference between the men's and women's models is the way they were specified. That is, at the outset, we included several independent variables in the women's analytical design that were not included in the men's model. Perhaps most important was our decision to include a measure of husbands' program involvement levels as a predictor of women's involvement, but not to include wives' involvement in the men's equation. Other variables (such as task involvement and self-perception as an operator) were not even measured for the male sample on the assumption that they would show little or no covariation with the dependent variable.

Six independent variables were found to have statistically significant regression coefficients in both the men's and women's equations. Among these are two personal background measures (educational attainment and participation in community organizations), three items describing respondents' involvement in agriculture (membership in farm organizations, proportion of lifetime spent on a farm or ranch, and overall farm program awareness), and one farm characteristic (total farm debt). In addition, constant terms were significant in both equations.

Of the eight significant variables exclusive to the women's equation, seven were not even measured for the male sample. Only the indicator of participation in farm decision making was available for inclusion in both models (but was excluded from the men's equation because of invariance). Of the four unique effects in the men's equation, three (lack of knowledge of farm financial data, total cropland acreage, and the indicator of mixed crop and livestock production) were tested in the women's model but did not have significant partial coefficients. The fourth unique effect (the range of farm tasks done by the respondent's wife) tends to function like the measure of husband's program involvement included in the women's equation, even though we have grouped it under "farm characteristics" in the men's model.

In an important sense, the differences between the regression models for men and women are influenced primarily by a priori assumptions that governed the collection of data and hence the initial specification of the two equations. At the same time, we should not ignore the fact that the original specifications included 19 items that were common to the men's and women's data sets. (In fact, all items initially specified for analysis in the men's equation, except wives' task involvement were also included in the women's model.)

the models might have been much greater than was finally observed.

At first glance, the values of the regression coefficients (slopes) for the six variables common to the two equations appear to differ substantially. For example, the coefficient for membership in farm organizations is 2.88 in the women's equation, but is 3.33 in the men's, suggesting that men may experience a greater boost in their involvement levels from membership than do women. However, when confidence intervals (ranges of expected error) are computed around these point estimates (using the reported standard errors as reasonable approximations of actual sampling variability), we find that there is considerable overlap in the confidence bands for the male and female samples (see Table 4.23) for five of the six coefficients. Only in the measure of general farm program awareness is there a difference in the coefficients that is large enough to be outside the bounds of sampling error. With this single exception, we are unable to conclude that men and women differ in the effects of common variables on their involvement levels.

General awareness of Federal, state, and local farm programs thus seems to exert significantly greater influence on men's program involvement levels than it does on women's. Comparing slopes for this variable, we see that the coefficient for men is over three times that for women. Assuming they are equal on all other variables in the equation, men who do not know enough about both state or local and Federal farm programs to say whether or not they are satisfied with them have involvement scores an average of 10 points lower than those who were able to evaluate programs at both levels. On the other hand, women who gave the same number of "don't know" responses to the evaluation questions were only

TABLE 4.23

CONFIDENCE INTERVALS FOR DIFFERENCES IN SLOPES FOR VARIABLES COMMON TO MEN'S AND WOMEN'S EQUATIONS

Variable	Women's Slope	Men's Slope	Difference	Standard Error of Difference	95 Percent Confidence Band (1.96 x s.e.diff)	99 Percent Confidence Band (2.58 x s.e.diff)
Member of community organizations	2.88	4.21	1.33	1.22	±2.39	±3.15
Educational level	.61	1.04	.43	.35	±0.70	±0.92
Membership in farm organizations	2.88	3.33	.45	.57	±1.12	±1.48
General program awareness	-1.59	-4.97	-3.38	.97	±1.87	±2.47[a]
Proportion of life spent on farm	2.09	5.64	3.55	2.08	±4.09	±5.38
Total farm debt	.009	.014	.005	.004	±0.009	±0.012

[a] Observed difference in slopes is statistically significant at p .01.

an average about 3 points lower on the involvement scale than women who were able to evaluate both state or local and Federal programs.

Proper interpretation of this difference in direct effect requires that the reader keep in mind the impact on the women's awareness coefficient of the removal of the husband's activity variable from the women's model. As we reported above, the omission of this item affects the women's awareness coefficient more than any other in the equation. In fact, when the direct impact of husbands' program application on wives' involvement is ignored, the observed difference in men's and women's general program awareness coefficients is not statistically significant. Thus, if our specification of the women's model is generally correct with respect to the influence of the husband, the fact that women are a good deal more likely than men not to be able to evaluate farm programs does not have as strong a direct effect on their program involvement activity as it otherwise might. At the same time, the quite strong effect of awareness on men's program involvement levels, coupled with the strong effect of men's activity on their wives' involvement levels, indicates that women's program involvement is indirectly conditioned by their husband's general awareness of programs.

Summary

The analysis in this chapter has demonstrated that, for the programs, agencies, and behaviors studied, on average, farm women are substantially less involved in farm programs than are male farm operators. Comparing men and women on a question-by-question basis, we saw that, with but one or two exceptions, proportionately fewer women than men reported being familiar with and knowledgeable about programs, and being personally involved in application processes or business dealings with sponsoring agencies. Furthermore, comparing men's and women's involvement scale scores suggests that, on an individual level, men are generally involved in a wider range of program or agency activities than are women.

One of the central objectives of this study was to determine whether farm women perceived themselves to be victims of unfair or unequal treatment from USDA personnel on the basis of their sex. Our questions about respondents' reasons for not filing program applications and about the general fairness of the application process failed to find evidence of such perceptions. Furthermore, very few women reported dissatisfaction with their business contacts with agency personnel, and those who did generally mentioned performance issues rather than the personal treatment they received. Finally, only 1 percent of the women indicated that they had ever been prevented or discouraged from participating in an Extension service activity in which they were interested. Mindful of the limited scope of the study--our focus on three programs, four agencies, and only the most important influences on involvement behavior--we conclude that overt dicrimination against farm women by agency personnel is not a major problem affecting women's interactions with USDA.

Our multiple regression models have helped us to demonstrate that program involvement for both women and men is conditioned by a range of personal and enterprise characteristics. In the woman's model, we noted especially the powerful influence of the program involvement of respondents' husbands on their own involvement levels, and the several significant effects associated with the extent of women's participation in the work and management of their operations.

Comparing the variables common to the two equations, we found that with only one exception (general knowledge about farm programs), men and women receive equivalent "boosts" from the processes that influence program involvement. In fact, we found that even this difference disappeared when the women's equation was reestimated without the powerful husband's involvement measure. The constant terms for the two equations also differed significantly. This difference is due primarily to to the fact that men have essentially constant (invariant) scores on a number of farm involvement items not included in their interview schedules or in their equations. That is, nearly all men are involved in 100 percent of the farm tasks done and the farm decisions faced on their operations, and virtually all consider themselves to be one of the main operators for their enterprise. Thus the contribution of these factors to the average program involvement score for men appears in the constant term rather than through a variable.

On balance, we find little reason to believe that the observed difference in average involvement scores for men and women (about 10 points) is due to serious differences in the effects ("boosts") of relevant factors. However, we find ample evidence that men and women differ substantially in their averages and their degree of variability (i.e., their current status) on those same factors. Comparison of men's and women's mean scores on measured items (see Table 4.21) shows that farm women lag considerably behind men in the number of types of farm organizations they hold memberships in and the proportion of their lives spent on farms or ranches, and that they know less in general about farm programs and the financial status of their operations. Further, even where we have not collected data for men, we would argue that, compared with men, many fewer women claim to be one of the main operators, and they do a considerably smaller proportion of farm tasks than men.

Pointing out these status discrepancies is in no sense meant as a criticism. Considerable research on farm family dynamics has documented ways in which farm couples divide and share responsibilities for their homes and operations. There is, in fact, no compelling reason to expect men and women to attain equal status on the measures we consider, except as a matter of their own choosing. From an analytical point of view, however, these differences in initial status point to a crucial question: If the differences were eliminated, would the observed difference in men's and women's program involvement scores disappear as well?

The coefficients estimated for the women's regression model can help us to answer this question. That is, we can use the regression equation as a simulation device, allowing us to estimate the change in women's average involvement score that would result from changes in the average values on a selected set of the predictor variables. If the predicted average involvement score increases to be equal to that for men, we will have strong evidence that male-female involvement differentials are a result of choices made by farm women within the family context concerning the role they will play in the overall operation of their farms. If, however, the simulated average involvement score for women still falls far short of the men's average, the interpretation will be less clear. It may be that the seemingly insignificant differences in individual structural coefficients tend to cumulate into a sizable difference in the boost received by men. Moreover, we will not be able to rule out the possibility that women are, on average, hampered from program involvement by barriers or obstacles not detected in this survey.

Table 4.24 presents both the inputs to and the results from our simulation model. The first column displays the observed mean scores for all items significant in the women's equation, and the second column contains the subset of revised means. Revisions are limited to measures of women's farm involvement--the items we consider to be most amenable to change. The means for the husbands' program involvement, women's personal background characteristics, and farm characteristics are left unchanged. In most cases, we have simply set the women's means equal to the mean scores observed for men. As have have frequently mentioned, we did not always collect identical data from men on farm involvement items. For these variables, we have substituted a mean score that represents a reasonable maximum limit for both men and women to attain. For example, for the variable that counts the different types of farm organizations the respondent belongs to, we have raised the women's mean from .61 to 1.16, the mean observed for men. On the farm work measure, where we do not have data for men, we have arbitrarily raised the women's mean from .53 to 1.00, representing the case in which all women participate at least occasionally in all tasks done on their farms. Similar adjustments have been made in the terms concerning farm decision involvement and self-perception as one of the main operators, simulating the situation in which women take part in all the listed types of farm decisions, and all women view themselves as one of the main operators for their enterprises.

The third column in Table 4.24 displays the estimated slope (structural coefficient) for the women's equation, also shown in Table 4.22. Column 4 displays the contribution in points to the observed women's average involvement score for each predictor variable (i.e.,

TABLE 4.24

RESULTS FROM A SIMULATION MODEL OF FARM WOMEN'S PROGRAM AND AGENCY INVOLVEMENT

Item	Observed Mean	Revised Mean	Slope	Observed Points	Simulated Points
Husbands' program involvement	.36	--	10.59	3.81	3.81
Member of community organizations	.61	--	2.88	1.76	1.76
Educational level	3.56	--	0.60	2.14	2.14
Financial independence	.84	--	1.03	0.87	0.87
Elected to public office	.08	--	2.82	0.23	0.23
Membership in farm organizations	.61	1.16	2.88	1.76	3.34
Proportion of farm tasks done	.53	1.00	4.32	2.29	4.32
Lacks general program knowledge	.45	.29	-1.59	-0.72	-0.46
Considers self one of main operators	.55	1.00	1.76	0.97	1.76
Proportion of farm decisions R shares	.48	1.00	1.87	0.90	1.87
Proportion of life spent on farm	.63	.71	2.09	1.32	1.48
R's name on contract for rented land	.10	.39	1.93	0.19	0.75
R's name on checks for products sold	.33	1.00	1.00	0.33	1.00
R's name on deed for owned land	.77	.88	1.07	0.82	0.94
R could run farm alone if something happened to spouse	.57	.92	0.98	0.56	0.90
Total farm debt (thousands)	43.58	--	0.009	0.39	0.39
Total acreage	568.00	--	0.0003	0.17	0.17
Operation produces soybeans	.21	--	1.02	0.21	0.21
Constant term	-3.44	-3.44	1.00	-3.44	-3.44
Total contributions (predicted mean)				14.56	22.04

the product of the mean in column 1 and the slope in column 3). The final column contains the simulated contributions of the altered variables (the product of the slopes and the revised means). The sum of the individual contributions appears at the foot of the table below the fourth and fifth columns.

The regression method is mathematically constrained to produce a sum of contributions that is equal to the observed mean for the dependent variable. Thus the sum at the bottom of column 4 (14.56) is identical to the measured mean for the women's program involvement index as reported in Table 4.13. The simulated prediction yields an average involvement score of 22.04, about 7.5 points higher than the observed mean. The predicted gain from the simulated changes is nearly 80 percent of the size of the observed difference in men's and women's average involvement scores, and brings the women's average to within about two points of the men's mean. The remaining difference attains statistical significance (even at the .01 alpha level), but, in substantive terms, we would not judge a difference of this size to be of overwhelming practical importance.

The predicted increase of 7.5 points in women's average involvement scores can easily be apportioned across each of the simulated changes by dividing the net gain due to each altered variable by the total observed change. Carrying out these calculations shows that nearly two-thirds (64 percent) of the predicted gain is attributable to only three of the ten variables whose means we adjusted: the proportion of farm tasks performed (27 percent), the proportion of farm decisions shared (13 percent), and the number of different types of farm organization memberships (24 percent). The reasons for their relatively strong impact are the same for all three variables. In terms of their direct effects upon program involvement, all three variables have substantial slopes. In addition, for these items, women's mean scores were only about half those observed or assumed for men. Equalizing men's and women's status on these items thus led to substantial shifts in the predicted mean for women.

The results of the simulation are not, by themselves, conclusive proof that differences between men and women in government program involvement are due primarily to differences in their involvement with their own operations. Accompanied by the many other findings summarized above, however, the simulation results strongly reinforce our conviction that sex discrimination and unfair treatment have little to do with either the variation in women's program and agency involvement or the differences in involvement levels between women and men. First, our analysis of women's program experience data on an item-by-item basis failed to disclose any evidence that women perceived unequal access or treatment to be a major problem. Second, our relatively simple multivariate models succeeded in accounting for a relatively high proportion of variance in the women's involvement index using only respondents' personal, environmental, and farm involvement data. Finally, by simulating changes in women's farm involvement measures to bring them into line with men, we were very nearly able to explain away the observed differences in men's and women's average involvement scores.

Does this mean that farm women enjoy a relationship with the U.S. Department of Agriculture that is entirely free from any form of sex discrimination or difference in treatment? Not necessarily. In a thirty-minute interview, only so many topics can be addressed, only so many research approaches tried. We cannot ignore the possibility that these same survey respondents might have conveyed quite a different picture if we had asked about different programs or agencies, or measured their perceptions and experiences in different ways. Only future research, by building upon and expanding beyond the approaches used here, and by confirming, qualifying, or overturning our findings, can ultimately settle the issue of how far our conclusions should be generalized.

CHAPTER 5

Conclusions and Discussion

In this report, we have presented the results of a 1980 national survey of American farm women. Our main objectives were to collect and analyze basic data on farm women's involvement in the work and decision-making for their operations and on their involvement in the program activities of the U.S. Department of Agriculture. Of special interest was the question of whether farm women believe that they are treated unfairly or unequally by the personnel or policies of USDA. These issues have been addressed in detail in Chapters 2 through 4. In this chapter, we attempt to develop some general conclusions. To assist us in this effort, we introduce data from two final survey items through which farm women expressed in their own words their views on their relationship to USDA.

The Farm Women's Agenda

The individual items and scales on women's farm, community, and work involvement provide a reasonably detailed portrait of the ways farm women relate to their immediate environment. The material on program and agency involvement helps us to understand one aspect of their relationship to USDA. In this section, we explore this relationship in a more general way. One interest is to explore whether and to what degree our respondents see themselves as members of a "client group" or "constituency"--one of many served by USDA. That is, do individual farm women, regardless of whether they take active roles in politics or politically oriented organizations, perceive themselves in any sense as a group with preferences, desires, and claims to express to the federal government

(USDA)? In addressing this question, we examine one aspect of farm women's political and social agenda--the list of issues affecting their lives over which the Agency may have some influence. By "agenda" we do not imply that farm women necessarily have an organized program of action which, as a group, they would press upon the government. We use the term analytically: if our random sample of respondents had actually been gathered together in one place in the summer of 1980, what issues would have been uppermost in their minds?

Our original intention was to finish each woman's interview with a single open-ended question asking her opinion about what policy action by USDA would be most beneficial to farm women. We expected women to answer using a clearly female perspective, though not necessarily from a feminist or "women's lib" point of view. (In fact, the question wording was chosen carefully to avoid conveying the impression that we anticipated a "liberationist" response.) We also felt that such a question would provide us a final, relatively unobtrusive way to detect any evidence of concern about unfair or discriminatory treatment which might have been missed by the more narrowly focused fixed-choice items earlier in the interview.

Somewhat to our surprise, we found that no matter how much the question wording emphasized our interest in the specific problems and views of farm women, most pre-test respondents chose to answer the question from the broader viewpoint of the agricultural producer, eschewing a more particularistic reference to their own gender. To these respondents, the "farm women's agenda" was simply the farm agenda articulated by a woman. When interviewers probed for a second response, reemphasizing the focus on federal policy toward farm women as a group, many respondents could give no answer, explaining that they had never before considered farm policy issues in gender terms before.

These initial results alerted us to the need to study both aspects of the women's agenda. Accordingly, the final version of the survey questionnaire included two open-ended questions. The first asked about the most important policy action USDA could take on behalf of all farmers and ranchers. (For purposes of comparison, this question was included as the final item in the men's questionnaire as well.) A second item then asked female respondents about the most important thing USDA could do to help farm and ranch women.

The use of open-ended questions to investigate opinions on policy matters entails certain risks as well as benefits. Compared with more focused fixed-choice questions, open-ended items tend to elicit only the most salient of a respondent's attitudes and beliefs while missing other, less strongly held opinions. (This is especially true when respondents are asked for a "single most important" answer.) The reader should recognize that the absence of any given policy or issue in our response tabulations does not necesarily mean that the issue is unimportant to our sample of respondents. In the extreme case, an issue which ranked second in importance to each and every survey respondent would not be detected by our questions. At the same time, our questions have the advantage of circumventing another well known difficulty which occurs when respondents are asked for their reactions to a standardized list of policy issues. In the latter case, it is never entirely clear whether respondents are revealing genuine, well developed personal opinions, or are merely expressing a position in order to avoid seeming indecisive or uninformed.

Our open-ended questions avoid the measurement of "non-attitudes" at the risk of failing to detect concerns of secondary importance.

Responses to both items were recorded verbatim and later assigned to one of about fifty coding categories based upon their content. The detailed response codes have been grouped into a manageable number of logically related categories for presentation. (A complete breakdown of the frequency of initial response codes is available upon request from the authors.) Table 5.1 displays the distribution of men's and women's responses to the general question on what USDA could do to help "farm and ranch people." Women's responses to the follow-up question on how USDA can help "farm and ranch women" are presented in Table 5.2.

In the first table we see that only 18 percent of the women and only 7 percent of the men were unable to answer the general question about USDA policy. Among both genders, economic issues were by far the most commonly cited. Forty-one percent of the women and 34 percent of the men considered it most important for USDA to help defend producers' ability to make a living. This group includes 25 percent of women (16 percent of men) who mentioned specifically that USDA should act to increase farm prices, and another 6 percent of women (9 percent of men) who stated more generally that USDA should do more to "support farm incomes" through price support and other economic programs. Also included in this group are 5 percent of women (3 percent of men) who specifically mentioned that USDA could best help producers by acting to control costs of production, most often citing fast rising (in 1980) costs of fuel and petroleum-based chemical inputs. In addition, this included 3 percent of both men and women who felt that USDA should help to make loans and credit cheaper and more accessible to farmers and

TABLE 5.1

THE MOST IMPORTANT THING USDA CAN DO FOR FARM AND RANCH PEOPLE

(Percent)

Item	Women	Men
Increase farm prices; support commodity prices/farm incomes; control or reduce production costs; ease access to credit, lower interest rates; lower taxes; tighten credit; stop commodity speculation	41	34
Cut back government regulation, intervention in the economy; cut back or eliminate USDA or its programs ...	10	18
Marketing issues: expand markets (especially export markets); end embargo; support "farmers' markets"	6	13
Change USDA's overall orientation; USDA should support only producers; promote producers' image; support farm organizations; employ at USDA only those with farm backgrounds	8	11
Help "family farms" rather than agri-business	4	5
Education programs and assistance; sponsor more research; information programs; advisory services	4	4
Help producers obtain more/better water supplies; help solve environmental and conservation problems; weather modification	2	1
Develop other new programs and/or regulations to serve producers' interests	1	2
Keep agricultural land in production; keep U.S. land out of hands of foreign investors; open up new land to production; change inheritance and estate tax laws	2	2
All other concrete recommendations	2	1
Satisfied with USDA as it is	2	1
Nothing	--	1
Don't know	18	7
Total	100	100
(N)	(2,501)	(564)

ranchers. Another 2 percent of both genders considered it most important for USDA to do something to reduce the tax burden on producers. (This group excludes those who mentioned inheritance taxes, who were counted separately.) Among those who mentioned taxes, several respondents thought USDA should support special property tax rates for farmers with lower levies on land in production. Finally, this overall group included small numbers of men and women (less than 1 percentage point of either gender) who felt that credit should be tightened and fewer federal loans made to producers who were bad risks, or who thought it most important that USDA do something to control speculation in agricultural commodities by non-producers.

The next largest category of responses focused on the reduction or elimination of government intervention in the agricultural economy. Ten percent of women and 18 percent of the men indicated that the most important thing USDA could do for farmers and ranchers would be to reduce or entirely cease efforts to influence or regulate the agricultural sector. A few respondents of both sexes cited specific regulatory policies (e.g., those covering use of pesticides, animal drugs, labor markets, etc.) or other USDA activities (e.g., crop and livestock surveys) which they wanted curtailed. However, the majority of this group (8 percent of women, 16 percent of men) gave more general responses such as "USDA should just close down and let us operate under free enterprise" or "get the government out of it and let supply and demand take care of themselves." Among the most commonly heard comments from this group was the frustrated expression of an Ohio woman: "If they would just please get off our backs and let us do it on our own."

Marketing issues were cited by a third identifiable group, comprising 6 percent of all women and 13 percent of all men. Included under this heading are 3 percent of the women and 9 percent of the men whose main concern was for the export markets for their products and who voiced the belief that USDA should do something to end the embargo on grain sales to the Soviet Union which was in place at that time. Relatively small numbers of respondents mentioned other marketing issues such as the need for import quotas or other actions to prevent the dumping of low-priced foreign products in U.S. markets, and the belief that USDA should be more active in promoting the sale of American farm products overseas and in supporting direct-to-consumer "farmers' markets" here at home. Given the current debate on the topic, it is worth noting that only three women (and no men) mentioned the use of food products as direct instruments of foreign policy, either in the sense that the U.S. should deny exports to governments whose policies we do not approve, or in the sense that food might be used as a tool for the furtherance of U.S. foreign policy goals. If these policy options are valued by farmers and ranchers at all, they clearly were not uppermost in respondents' minds during the summer of 1980.

The fourth largest group of respondents voiced the general desire that USDA should alter its political and bureaucratic orientation and concentrate more on improving its relationship to agricultural producers. Overall, 8 percent of women and 11 percent of men offered responses on this theme. Most of these (5 percent of women, 4 percent of men) were general in nature, stressing that there should be more open communication between USDA policy makers and their constituents, and a more supportive, sympathetic stand by the agency toward producers. Also counted within this group are 1 percent of women and 3 percent of men who pressed for changes in USDA programs and procedures to make them more accessible to producers, who advocated that USDA drop such functions as the food stamp program and consumer protection, or who felt that the agency should establish a policy of employing only those with agricultural backgrounds. About 1 percent of each gender specified that USDA should take a more active public relations role on behalf of farmers and ranchers, helping to educate the general public on matters of farm life and agricultural economics. Evident here was serious concern about the growing public impression that producers deserve most of the blame for retail food price increases. Another small group (1 to 2 percent of both sexes) felt it most important for USDA to encourage younger generations to pursue agriculture as a career, and to do whatever was necessary to remove barriers to young people's entry into commerical agriculture as independent producers.

Four to five percent of both men and women indicated that USDA should develop and implement more programs designed to assist and protect "small farmers and ranchers" or "family operations" rather than supporting, as they saw it, only the largest, most economically powerful units. Several responses in this category voiced the concern that federal support was being diverted away from the smaller family enterprises and toward large scale, fully integrated corporate operations which were in business only as financial investments.

The provision and upgrading of USDA education, information, research, and advisory service programs was considered most important by 4 percent of both the men's and women's samples. The majority of these comments mentioned the need to expand information programs both in terms of wider distribution and coverage of new topics. Only a handful suggested restrictions on the distribution of USDA information to food buyers and other market competitors.

The remaining response codes contained relatively small groups of respondents. Two percent of the women and 1 percent of the men mentioned such things as help with water quantity or quality problems, soil or other conservation issues, environmental problems or weather modification as the most important thing USDA could do. Similar proportions (1 percent of women, 2 percent of men) disagreed with their counterparts discussed above, by indicating a desire for new USDA policies and regulations besides those mentioned above dealing with small farms and information programs. In addition, 2 percent of both samples mentioned property or land use issues, with most of this group calling for USDA support for change in inheritance and estate tax laws to make it easier to bequeath farm operations intact to the surviving spouse and children. A very small number specified that USDA should develop a stronger land use policy to keep agricultural land in production, to prevent its purchase by foreign investors, and to open up more public land to agricultural uses.

About 2 percent of the responses from each sample could not be classified into any of the categories discussed above. A small number of respondents cited two or more issues they wanted USDA to address, but could not specify one as having greater importance. An additional 2 percent of both men and women said they were quite satisfied with USDA performance as it was, and could think of nothing else that the Agency should do. As we reported at the beginning of this discussion, 18 percent of women and 7 percent of men said they were not familiar enough with USDA or its programs to make a response.

In summary, although the response topics displayed substantial diversity, economic issues, especially price levels for farm commodities, were dominant in respondents' minds during the summer of 1980. This is consistent with the expression of dissatisfaction with farming as a way of making a living as shown in Chapter 2. Next most common were remarks favoring the reduction of government regulations and interference in the agricultural economy. While we recognize the distinctive nature of the problems and proposed solutions described by our survey respondents, we can hardly avoid the general conclusion that in their concern about economics and the role of government, our respondents displayed a pattern of attitudes and beliefs quite similar to that which the wider public carried to the voting booths later in the year.

We now turn to the data from our final survey question concerning the most important thing USDA could do to help farm and ranch women. As described above, all responses were recorded verbatim and assigned to one of a detailed list of response categories. Because of our interest in farm women's own evaluation of the sex discrimination issue, we gave special priority in classifying responses to any mention of unfair, unequal, or discriminatory treatment. To the extent that sex discrimination is a problem of the highest importance to farm women as a group, our procedures maximized our chances of discovering evidence of that concern.

Table 5.2 presents the distribution of responses to this item. We note with interest the fact that over one-third (35 percent) of the women found themselves unable to answer the question. Most of them explained that they had never had any reason to consider the question in gender terms before and saw no reason to manufacture a response just for the sake of the interview.

The most straightforward interpretation of this result might be that, for these respondents, the notion of "farm women's issues" has little meaning--that too many other, more important concerns occupy their minds. If women's

TABLE 5.2

WHAT USDA CAN DO TO HELP FARM AND RANCH WOMEN

Item	Percent
Help change inheritance laws and estate taxes; help women keep farms if widowed; help with estate planning	14
Provide/improve education and information programs for women .	10
Promote wider recognition of farm women's roles; recognize economic contribution of farm women	6
Provide other (non-educational) programs for farm women	4
Help women obtain access to loans or credit in their own names	1
Help women maintain roles on the farm rather than in off-farm jobs	1
Keep USDA/government out of women's lives	1
All equity-related comments: eliminate discrimination against women; treat men and women equally	4
Satisfied with USDA as it is	4
Help women by helping their husbands	8
Answer duplicating response to previous question on USDA help for farm and ranch people (no focus on women as a group)	8
Nothing	4
Don't know	35
Total	100
(N)	(2,495)

issues were of great salience to their everyday lives, our question provided respondents an opportunity to air their views. This may be overstating the case, however. To some extent, "don't know" responses may have been a result of the way the question was worded. It must be kept in mind that our question asks about women's issues explicitly in terms of respondents' preferences for policy actions by USDA. Respondents who were concerned about such women's issues as inheritance laws or access to credit, but who considered such matters beyond the jurisdiction or influence of USDA, would probably have considered them inappropriate responses to our question. Because of the reference to USDA, we cannot be sure that "don't know" responses reveal an absence of awareness or concern for farm women's issues. Still, given the same type of stimulus in the question wording ("...the most important thing USDA could do..."), the proportion of women giving "don't know" responses is twice that observed for the immediately preceding question.

In addition, there are four additional categories which might be considered non-responses or at least evasive responses to our question, and which comprise an additional 24 percent of the answers received. About 8 percent of the women simply repeated or slightly restated the answer they had just given to the previous question about help for all farmers and ranchers. To these respondents, farm women's issues are no different from the issues facing all producers. Another 8 percent stated that the most important thing USDA could do for farm women was to help their husbands. Four percent claimed that they were fully satisfied with what USDA was doing for farm women, and an additional 4 percent stated in negative terms that there was nothing that USDA could do for them.

Altogether, about three women in five either could not or would not offer a response which focused on help for farm women as a separate group.

These results suggest that the majority of farm women do not now consider themselves as a unified, separate constituent group for USDA. This is not to say that there is no sense of common feminine identification among these women. Nor can we conclude from the present data that farm women are generally without common political interests or concerns. Our point is only that these women may not see their needs as separate from those of their operations.

Moreover, it would be a serious mistake to overemphasize these results to the neglect of the 41 percent of women who readily cited women's issues in response. Of this group, about three-fourths of the responses (30 percent of the female sample) focused on one of three major issues. About 14 percent of all women (one-third of those who stated an opinion) felt that USDA should act to improve the situation of women who attempt to continue operating their farms after the death of their husbands. Included among this group are 12 percent who sought USDA's help in changing inheritance laws and taxes to make it possible to retain family farms intact. An additional 2 percent advocated the implementation of special training programs and advisory services for widows attempting to assume the entire burden of farm operation.

Comments on the inheritance tax issue were by far the most intense and emotional we received. Most of the women in this group had had direct experience, either personally or through a relative or friend, with the plight of a widowed farm woman. They described with bitter resentment the unfolding of a legal process which in their view defied all justice and logic, and which ultimately deprived the surviving wife of property because evidence of her involvement in the operation was deemed inadequate. These women were incensed by the idea that after a long life of cooperative involvement with their husbands, the farm property could be treated as an "inheritance" rather than as something which already belonged to them. Although these women varied considerably in their familiarity with state and federal laws governing inheritance procedures, they were united in the feeling that there was no more important way for USDA to help farm women than to take up their cause for radical change in inheritance laws and elimination or drastic reduction in estate taxes.

Many of the women who cited this issue were all too aware that their husbands would face quite a different situation if they (the wives) should die first. These respondents interpreted the imbalance they perceived in inheritance law as a species of sex discrimination. As one respondent put it, "It comes right down to equal rights, doesn't it?" However, most of these women recognize that USDA had no direct control over this issue. Their object was to enlist USDA support on their behalf to end unequal treatment in the wider legal system.

The second major topic, mentioned by 10 percent of the women (25 percent of those who made a response), was the need for more and better education and information programs for farm women. This group was about equally split between those who thought USDA should help to provide more educational opportunities for women, especially young women on the verge of making long-term career choices, and a second group who felt it was important for USDA to begin gearing its information programs to the needs of farm women, paying special attention to traditional farm women's communication channels and to the need to overcome historically established shortcomings in women's information sources.

Among those who mentioned education or information needs, three topics predominated. About one-third of this group recognized that they were generally uninformed about the program activites now offered by USDA. Said one, "I don't know what they're doing. They need to have a general information program so that farm and ranch wives will know what is available, to print booklets telling us what kinds of programs and services exist." The fact that these respondents were not aware that such general information already exists and is readily available suggests that there are features of the distribution system which tend to bypass or neglect communication channels often used by women. Once one has made initial entry into USDA's information flow, for example, through Extension Service or program offices, or through USDA publication such as *Farmline*, *Agricultural Outlook*, or the *Farmers' Newsletter* series, additional information on USDA programs and services is easy to obtain. The initial exposure is crucial, however, and these findings (as well as those in Chapter 4) suggest that the Agency needs to examine whether existing distribution channels provide both genders with equal access to general information.

Another common topic mentioned by this group was the need for information and education on business and economic issues and farm management practices. Virtually no one mentioned the need for training in the area of technical production methods. This may be largely due to the fact that over 90 percent of the women in our sample had husbands present. We suspect that widows would show considerably greater interest in technical training, but the number of widows in our sample is too small to test this hypothesis directly. On the other hand, many women considered themselves handicapped by insufficient knowledge of sound management techniques, marketing strategies, and general agricultural economics. These women felt that education programs in these fields were the most important things USDA could provide to assist women in reaching their full potential as operators and partners.

The third topic related to educational and information needs is also related to the inheritance issues discussed above. This group of women voiced concern about inheritance laws and estate taxes, but did not specifically call upon USDA to support changes in procedures. Instead, they felt that the Agency should organize seminars and information programs for women to familiarize them with the existing system and to assist them in preparing a strategy for dealing with it. Implicit in some of these suggestions was the belief that the spread of information about current laws and procedures would tend to politicize the newly informed women, to automatically mobilize their opposition against what is, to these respondents, clearly an unfair system. Most of these women, however, were simply expressing their own need for authoritative information and guidance in their attempts to cope with an extremely complex, confusing, and emotionally charged problem with enormous consequences for their future lives.

A third group of women (about 6 percent of the sample) considered it most important that USDA accord farm women the recognition they deserve both in terms of their status as partners in the work and management of their farms, and in terms of the economic value of their contribution to agricultural productivity. Comments about recognition were of two major types: one group politically neutral in essence, the second more attuned to the social and political implications of how they are perceived by the rest of the world. Comments of the first type were made by women who took great pride in their lifestyle and in their status as producing farm women. They felt that they were little noticed and poorly understood by the general public, and felt that USDA could do more to foster greater awareness and realistic understanding of their roles in agriculture and in rural society. The second group of women demonstrated concern that lack of recognition for their roles as producers and partners has a damaging effect on their standing with other social institutitons, such as credit markets and probate courts. To these women, recognition is much more than popular awareness and understanding; it represents the most basic foundation upon which attainment of their rightful social and legal status depends. A Colorado woman typified this group when she said, "The way things work now, if something happened to my husband, if we were separated, I wouldn't have an identity of my own . . . The work I do on the farm should be credited more. And the Agriculture Department ought to take the lead on this." Another commented, "Women should be recognized as co-partners with their husbands. When we do business with the government, all papers and forms should have spaces for both men and women to sign. That way, if I'm on my own, I can support my position as a farmer."

Relatively few women offered other types of comments beyond those discussed above. About 4 percent mentioned a variety of other, non-educational programs they felt USDA should provide for women, ranging from support to women's farm organizations to programs sponsoring child care services to help women in furthering agricultural careers. One percent each specified a desire for Agency assistance to women who sought loans or credit in their own names, and help in finding ways to make their farms profitable enough so that they would not have to continue working at off-farm jobs. Only one percent remarked that they hoped the federal government and USDA would stay completely out of women's lives.

Overall, 4 percent of the women interviewed gave responses that might be construed as complaints about discrimination by USDA against farm women. A few of these comments cited specific kinds of discrimination, such as the allocation of USDA loans or access to existing educational programs. For the most part, however, these comments were very general in nature. When a respondent exhorts USDA to "deal with us on an equal basis, as they do with men," it is difficult to judge whether she was reacting to an actual discriminatory experience, or was simply stating her general values and desires for the Agency's conduct. At the same time, comments of this kind reveal genuine concern about the issue of fair and equal treatment of women. The lack of specificity is probably due more to the respondent's desire to give a concise answer to a very general question at the end of a long interview, rather than to a lack of detail in her thoughts or ideas. On balance, however, mentions of this issue were not common.

We believe that these results reinforce those described in the preceding chapter: farm women do not consider overt discrimination by USDA to be among the most important problems they face. Yet the possibility remains that inequitable treatment by USDA may be an important "secondary" problem which could not be uncovered by a question focusing only on the "most important thing USDA could do to help farm and ranch women." We doubt this for two reasons. First, our interviewers were trained to accept (but not to solicit) multiple responses to this item, and to allow respondents plenty of leeway to select the one issue they considered most important. A thorough editing of the completed questionnaires revealed not a single case in which sex discrimination was mentioned as one of two or more responses, but was not chosen as most important. Second, the fact that over one-third of the women had no answer for this question at all, and that nearly 60 percent did not give a response which focused specifically on women's issues strongly suggests that "secondary" issues or problems exist for only a minority of farm women. We are confident that this aspect of the farm women's agenda--the issues which affect women as a group--is adequately covered by our final question.

Comparison of the response patterns to our two open-ended questions also reinforces another observation made in the preceding chapter. In response to open-ended items on farm program involvement, women often phrased their answers in plural or collective terms. They commonly referred to the experiences of their families or operations, even when the question explicitly focused on the individual respondent. In this chapter, we saw that while over 80 percent of women made valid, codeable responses to our question on general farm issues (how USDA could help farm and ranch people), a much smaller proportion gave meaningful answers to the item on farm women's issues. These results are tangential to the main purpose of the questions and we have no wish to over-interpret them. However, we believe they reflect an important aspect of the way many farm women conceptualize their identities and roles. Compared with their responses on women's issues, their greater responsiveness and fluency in discussing general farm issues suggest that farm women are more concerned about the major problems facing their operations and their industry as a whole. Without minimizing the importance of respondents' gender orientations, we believe the data support the notion that most farm women identify primarily with their status as producers or members of agricultural enterprises, and only secondarily with their status as women in this field. When they do ask for help as farm women, it is often for help to keep the farm in the family, for information to enable them to farm, or for recognition of the part they already play.

Conclusions

At the beginning of this chapter, we noted the considerable diversity of farm women with respect to their involvement in their farms and ranches and their participation in USDA programs. In our view, the results presented in this chapter confirm this observation. But does the sort of diversity we have been describing have any political implications for the conduct of USDA's affairs? We think so. In the past, much research on the role of farm women has tended, for the sake of conceptual simplicity, to classify them into a relatively small number of qualitative categories describing their relationships to their farms, their work, and their homes (see, for example, the references cited in Chapter 2). More recently, typologies of farm women have become somewhat more elaborate, yet the tendency remains to partition them into categories with descriptive labels such as "independent producers" (women who manage operations entirely alone), "partners" (those with full legal status as co-operators with their husbands or someone else), "helpers" (women who make limited contributions to their operations on a part-time basis), and "farm wives" (housewives who happen to be married to farm operators).

On the surface, these categories seem to be quite reasonable and to serve a useful function for sociological and economic research. At the outset of this study, they seemed to us an adequate guide to the design of this research. We have come to believe, however, that such role classification of farm women may have outlived its usefulness--that it may obscure more than it reveals.

Qualitative classifications pervade our lives. Generally speaking, the value of such classifications--both to social science research and to the solution of practical everyday problems--seems so great that we rarely give a second thought to their impact upon our understanding. By their nature and purpose, qualitative classifications emphasize the separateness and discreteness of their categories, while simultaneously deemphasizing both the variability of the units within the categories and the continuity between them. While such schemes may be perfectly appropriate for grading meat or sorting eggs, they can be woefully inadequate and simplistic when applied to human beings. Even with the relatively limited range of data we were able to collect in the thirty-minute interview, it is apparent to us that the continuity and variability in women's involvement with their operations and with USDA defies any straightforward aggregation into a small number of involvement categories. Unless we were to use precisely the same survey questions and classification system as another researcher, we would not for our sample be able to tell where "farm wives" end and "helpers" begin.

Of course, we recognize that the main problem does not lie so much with the classification scales themselves as with the way they are applied to concrete situations. However, their meaning and their construction influence their use. Even though nearly all the traditional classifications of farm women have been based on a hierarchical ordering or involvement levels, there is no uniformly accepted way of defining the categories even among social researchers, let alone government policy administrators. One notable exception applies to those women usually occupying the topmost position of the scales, the self-sufficient women who run their operations by themselves. Owing to clear legal and functional definition, this group (along with those who were legal full-time partners) were clearly identifiable to researchers and policy makers alike. The status of women below these levels remained uncertain, but the consensus was that they were not "operators."

The significance of this result emerges in the context of the manner in which, until very recently, USDA (and other federal agencies such as the Census Bureau) chose to organize its own relationships with client farm operations. With few exceptions, federal policies tended to establish legal relationships with a single individual representing an agricultural enterprise--the "operator" or "principal operator." Historically, on family farms, which have always comprised the vast majority of enterprises, the operator was identified both in terms of legal status (ownership, tenancy rights, etc.), and function (the person who makes most of the day-to-day decisions about running the enterprise), and was nearly always the male head of household. While the origins of this practice are based in legal and administrative practicality, over the decades unanticipated consequences have emerged. At present, when sample surveys are able to provide a much clearer view of the valuable and often crucial role played by farm women on their operations, the habitual exclusion of women from operator status leads to increasingly bizarre results. The Census Bureau generally classifies farm women who are not operators (or employed off the farm) as "unpaid family labor;" the Internal Revenue Service and state taxing authorities impose paralyzing levies on the "inheritance" of an operation which these women may have labored for years to build and preserve.

Over the last forty years and more, research on farm women has contributed much to our understanding of the variability in women's involvement with their operations. However, by using qualitative classification schemes, we believe that many researchers have unwittingly contributed to the false impression that there are clear dividing lines separating "partners" from "operators" and "helpers" from "partners." Of course, researchers did not force the use of such classifications on the administrative agencies. At the same time, we believe that these analytical conventions tended to become reified, and to foster the belief that only those farm women who satisfied certain very selective criteria deserved to be ranked as operators.

Our findings suggest that the situation is not so clear cut. We would argue that on family farms, "operatorship" is often a family function, shared (to varying degrees) by husbands and wives, and sometimes including older relatives, siblings, or mature children as well. Taken together, we believe that much of the data from our survey support this view. From this perspective, there is no reason to be surprised that 55 percent of women respondents described themselves as one of the main operators for their farms or ranches. When given the chance to express it, many more women take on the identity of operator than would be so classified by existing government or social research practice.

Beyond this issue, we believe that joint operatorship is reflected in the division and sharing of labor and activity apparent in our data. It is important to note that men and women do not have identical activity profiles; but to us, the discrepancies observed are not sufficient to restrict the claim on operator status to only one family member. Likewise, the fact that husbands are more likely to carry a greater share of responsibility for farm management is not sufficient cause to exclude their wives from consideration as partners or co-operators. We think it is worth keeping in mind that only about 3 out of 5 of the married men surveyed felt that they could definitely continue to run their operations by themselves if something happened to their wives. This is a forthright statement by a substantial number of husbands of the crucial importance of the contributions made by their wives.

Our point is that the time has arrived to recognize that, despite customary usage, farm operatorship is a characteristic which an individual may have by degree. It is not, as in the old and tired joke about being "a little bit pregnant," something one either is or is not, with no middle ground. In fact, American farm women may be found at every point on the farm involvement continuum, from complete non-involvement through mutual, equal sharing with a spouse or other person, up to single-handed management. Moreoever, the continuous distribution is evident across all dimensions of involvement considered in this survey--farm work, decision making, and acting for the enterprise in dealing with the outside world, particularly USDA program agencies. From the standpoint of a policy administrator, it may appear seductively simple to identify a single individual who can be labelled "the operator" and vested with sole authority to speak and act for the enterprise. Our findings suggest that from the perspective of farm women who are actively engaged in the day-to-day business of agricultural production, such an approach is inaccurate, sometimes demeaning, and can be tragically unfair when husbands die.

We think that this situation should be rectified and that, in policy formulation and administration, farm women should be afforded the opportunity for greater recognition of the importance of their roles and positions on family farms. In this recommendation, we are not simply suggesting that all farm women (or men) are entitled to be viewed as farm operators or as full partners, or even that the differences in involvement levels between husbands and wives should be ignored. Nor, on the basis of this first major study of farm women, are we able to recommend specific criteria to establish whether a particular individual is an operator (or full partner) or not. However, administrative practice that tends to rely on an excessively restrictive, legalistic definition of operatorship will fail in important ways to recognize the contributions made by farm women to the vitality and productivity of American agriculture.

Moreover, we would suggest on the basis of expressed need and the findings reported in Chapters 2 and 4 that special efforts be made to improve the transmission of information to farm women. It may require information programs directed specifically at farm women, rather than at the farm population as a whole, to ensure that women are informed about the services and programs available to their operations. A division of labor within the family with respect to gathering and processing program information is efficient when the member who has the information is active in running the operation. But in many situations husbands will retire, seek off-farm employment, or die, leaving their wives with sole responsibility for running the operation. It is with the future as well as the present in mind that USDA should develop information services.

An accurate understanding of farm women's positions and contributions should be the cornerstone of future policy. We hope that the findings reported here will assist policy makers and administrators in reaching a sufficiently complex and differentiated view of farm women's roles as they continue to influence the social, legal, and economic policies which will affect these women's lives.

APPENDIXES

APPENDIX A

ESTIMATED STANDARD ERRORS AND CONFIDENCE INTERVALS FOR ESTIMATED PERCENTAGES

The percentages presented in this report are estimates from a sample and are thus subject to uncertainty due to the probabalistic nature of sample selection. The accompanying tables provide estimates of the degree of error likely to be associated with percentage estimates of various sizes and numbers of observations.

TABLE A-1

STANDARD ERRORS OF ESTIMATED PERCENTAGES

(In Percentage Points)

Number of Cases	Estimated Percentage			
	4% or 95%	10% or 90%	25% or 75%	50%
2,500	0.4	0.6	0.9	1.0
1,750	0.5	0.7	1.0	1.2
1,000	0.7	0.9	1.4	1.6
500	1.0	1.3	1.9	2.2
250	1.4	1.9	2.7	3.2
100	2.2	3.0	4.3	5.0
50	3.1	4.2	6.1	7.1

NOTE: Table entries were computed using the assumption of simple random sampling methods. Because of the complex sampling design used for the survey of farm women, actual standard errors may be slightly larger.

TABLE A-2

CONFIDENCE INTERVALS FOR ESTIMATED PERCENTAGES

(In Percentage Points)

Number of Cases	Estimated Percentage			
	4% or 95%	10% or 90%	25% or 75%	50%
	Alpha level = .05			
2,500	.8	1.2	1.8	2.0
1,750	1.0	1.4	2.0	2.3
1,000	1.4	1.9	2.7	3.1
500	1.9	2.6	3.8	4.4
250	2.7	3.7	5.4	6.2
100	4.2	5.9	8.5	9.8
50	6.0	8.3	12.0	13.9
	Alpha level = .01			
2,500	1.1	1.5	2.2	2.6
1,750	1.3	1.9	2.7	3.1
1,000	1.8	2.4	3.5	4.1
500	2.5	3.5	5.0	5.8
250	3.6	4.9	7.1	8.2
100	5.6	7.7	11.2	12.9
50	8.0	10.9	15.8	18.2

NOTE: Table entries represent one-half the width of the confidence interval. That is, for a percentage estimate of 50 percent on 1,000 cases, the range of sampling error is ± percentage points at the .01 alpha level.

APPENDIX B

ADDITIONAL MULTIVARIATE ANALYSIS OF WOMEN'S INVOLVEMENT WITH THEIR OPERATIONS

As mentioned in Chapter 3, the results for "percent of tasks done regularly" are almost identical to those for "percent of tasks done occasionally," as can be seen in Table B-1.

TABLE B-1

REGRESSION ANALYSIS OF FARM WOMEN'S INVOLVEMENT IN FARM TASKS

Independent Variables	Dependent Variables	
	Percent of tasks done on operation the woman does regularly (0-100)	
	Unstandardized coefficient	Standardized coefficient
Farm total value^a	-.002	-.03
Net farm income^a	-.04	-.04*
Percent of sales from crops^a	-.06	-.12**
Region: relative to South		
Northcentral	4.62	.09**
Northeast	5.36	.11**
West	6.37	.13**
Marital status (1=married, 0=not)	-22.49	-.21**
Husband who is employed off-farm (1=yes, 0=no)	4.34	.10**
Number of family members involved in day to day work^b	1.08	.06**
Number of hired hands and others involved in day to day work	-.05	-.02
Education: relative to high school graduate		
Less than high school	-.46	-.008
Vocational or some college	4.00	.08**
College degree or above	1.93	.03
Race (1=white, 0=nonwhite)	1.82	.01
Age	-.35	-.19**
Number of children under 6 years of age	-3.42	-.09**
Percent of life or work on farms	.06	.08**
Employed off-farm (1=yes, 2=no)	5.42	.11**
Name on deeds or rent contracts (1=yes, 0=no)	4.96	.09**
Constant	46.12	
R^2	.13	
N	2.212	

*.01 < p <.05

**p <.01

[a] Missing values replaced with means.

[b] Excludes a husband.

APPENDIX C

QUESTIONNAIRES, FEMALE AND MALE VERSIONS

NORC-4301
6/80
OMB 40-S-80019

National Opinion Research Center
University of Chicago

SURVEY OF FARM WOMEN

WOMEN'S QUESTIONNAIRE

CASE ID: ☐☐☐☐ 01-07/

HOUSEHOLD ID: ☐☐☐☐ 09-15/

17-20/'4301'

DECK 01

TIME BEGAN: ________ AM PM

FARM WOMEN INTERVIEW

PART I

1. First, do you usually refer to your operation as a farm or as a ranch?

Farm	1	30/
Ranch	2	
Other (SPECIFY ________________)	3	

---

2. Are you currently married, widowed, divorced, or separated?

Married	1	31/
Widowed	2	
Divorced	3	
Separated	4	
(IF VOLUNTEERED) Never married	5	

A. Do you consider yourself to be the main operator or one of the main operators for your (farm/ranch)?

IF NECESSARY: By "operator" we mean a person who makes day-to-day decisions about running the whole operation.

Yes	1	32/
No	2	
Don't know	8	

---

3. While you were growing up, did you live mostly on a farm or ranch, or did you live somewhere else?

Farm or ranch	1	33/
Somewhere else	2	

A. Altogether, how many years have you lived or worked on a farm or ranch? IF "All my life," PROBE: About how many years would that be?

ENTER NUMBER OF YEARS: ☐☐ 34-35/

---

4. Altogether, about how many total acres are there in your (farm/ranch)? Please include acres you own, or lease or rent from other people.

ENTER NUMBER OF ACRES: ☐☐☐☐☐☐ 36-41/

---

5. Do (you/you or your husband) own any of this land?

Yes .... (ASK Q. 6)	1	42/
No .... (SKIP TO Q. 7)	2	
Don't know ... (SKIP TO Q. 7)	8	

---

6. Is your own name on a deed or title to any of this land?

Yes	1	43/
No	2	
Don't know	8	

7. Do (you/you or your husband) rent or lease any of the land in your (farm/ranch)?

Yes .... (ASK Q. 8) 1 44/
No .... (SKIP TO Q. 9) 2
Don't know .. (SKIP TO Q. 9) 8

---

8. Is your own name on any lease or rental contract for any of this land?

Yes 1 45/
No 2
Don't know 8

---

9. Altogether, how many cropland acres are you operating this year. Please include all owned and rented land planted to crops.

ENTER NUMBER OF ACRES: ☐☐☐☐☐☐ 46-51/

IF NO CROPLAND ACRES, CODE "O" AND GO TO Q. 12, NEXT PAGE.

---

10. What are your main crops? CODE FIRST FIVE CROPS MENTIONED.

Alfalfa (hay or seeds)	01	Rice	17	52-53/
Barley	02	Rye	18	54-55/
Beans (dry)	03	Seeds	19	56-57/
Citrus fruits	04	Sorghum (all types)	20	58-59/
Corn (all types)	05	Soybeans	21	60-61/
Cotton, cotton products	06	Spring wheat	22	
Durum wheat	07	Sugar beets	23	
Flaxseed	08	Sugar cane	24	
Fruits (non-citrus)	09	Sweet potatoes	25	
Hay (other)	10	Tobacco (all types)	26	
Hops	11	Vegetables	27	
Oats	12	Winter (fall planted) wheat	28	
Peanuts	13	Other (SPECIFY)		
Peas (dry)	14			
Pecans	15	______________________	29	
Potatoes	16			

11. If we consider your total gross sales of farm products as adding up to 100%, about what percentage of your total sales would you say comes from crops, as opposed to livestock or animal products?

☐☐☐ 62-64/
(Percent)

Don't know 998

IF 100%, SKIP TO Q. 13.

IF LESS THAN 100%, PROBE: So that leaves about (100 MINUS ABOVE) percent of your total gross sales in livestock or animal products--right? IF NO, CORRECT ABOVE FIGURE OR WRITE IN EXPLANATION.

---

12. What are the main kinds of livestock, poultry, fish, or other animal products you are producing for sale this year? CODE ALL MENTIONED.

FOR EACH KIND OF LIVESTOCK OR ANIMAL MENTIONED, ASK A:
A. In rough figures, what was the largest number of (KIND OF ANIMAL) you had on hand at any one time last year?

Beef cattle (include calves, feeder cattle and finished cattle)	01	65-66/	☐☐☐☐☐	67-71/
			BEGIN DECK 02	
Dairy cattle including calves (milk, cheese, etc.)	02	09-10/	☐☐☐☐☐	11-15/
Hogs, pigs	03	16-17/	☐☐☐☐☐	18-22/
Horses	04	23-24/	☐☐☐☐☐	25-29/
Sheep, lambs	05	30-31/	☐☐☐☐☐	32-36/
Broilers (chickens)	06	37-38/	☐☐☐☐☐	39-43/
Layers (chickens, eggs)	07	44-45/	☐☐☐☐☐	46-50/
All other poultry (turkeys, ducks, geese, etc.)....	08	51-52/	☐☐☐☐☐	53-57/
Fish or other aquaculture products	09	58-59/	☐☐☐☐☐	60-64/
Other (SPECIFY) ____________________	10	65-66/	☐☐☐☐☐	67-71/
None	90	72-73/		

BEGIN DECK 03

PART II

13. Now I have some questions about the kinds of work you may do that contribute to the operation of your (farm/ranch). If a particular type of work doesn't apply to your operation, please be sure to tell me and we'll go on to the next one.

First is plowing, disking, cultivating, or planting. Over the last two or three years has this been one of your regular duties, something you help with occasionally, something you never do, or something that's not done on your (farm/ranch)? REPEAT FOR EACH ITEM BELOW.

	Regular Duty	Occasion- ally	Never	Not Done	
A. Plowing, disking, cultivating or planting	1	2	3	4	09/
B. Applying fertilizers, herbicides, or insecticides	1	2	3	4	10/
C. Doing other field work without machinery	1	2	3	4	11/
D. Harvesting crops or other products, including running machinery or trucks	1	2	3	4	12/
E. Taking care of farm animals, including herding or milking dairy cattle	1	2	3	4	13/
F. Running farm errands, such as picking up repair parts or supplies	1	2	3	4	14/
G. Making major purchases of farm or ranch supplies and equipment	1	2	3	4	15/
H. Marketing your products--that is, dealing with wholesale buyers or selling directly to consumers	1	2	3	4	16/
I. Bookkeeping, maintaining records, paying bills, or preparing tax forms for the operation	1	2	3	4	17/
J. Doing household tasks like preparing meals, housecleaning, and so on	1	2	3	4	18/
K. Supervising the farm work of other family members	1	2	3	4	19/
L. Supervising the work of hired farm labor	1	2	3	4	20/
M. Taking care of a vegetable garden or animals for family consumption	1	2	3	4	21/
N. Looking after children	1	2	3	4	22/
O. Working on a family or in-home business other than farm or ranch work	1	2	3	4	23/

14. I'd like to ask you about how you make different types of decisions for your (farm/ranch). For each one, please tell me whether you usually make the decision, (your husband/someone else) makes the decision, or you make the decision together with (your husband/someone else).

If I describe a situation that has never come up, please be sure to tell me and we'll go on to the next item.

First, who usually makes final decisions about . . .	Usually respondent	Usually husband/ someone else	Both together	Don't know	NA	
A. Whether to buy or sell land?	1	2	3	8	4	24/
B. Whether to rent more or less land?	1	2	3	8	4	25/
C. Whether to buy major household appliances?	1	2	3	8	4	26/
D. Whether to buy major farm equipment?	1	2	3	8	4	27/
E. Whether to produce something new such as a new crop or a new breed or type of livestock?	1	2	3	8	4	28/
F. When to sell your products?	1	2	3	8	4	29/
G. When to make household repairs?	1	2	3	8	4	30/
H. Whether to try a new production practice?	1	2	3	8	4	31/
I. Whether you take a job off the (farm/ranch)?	1	2	3	8	4	32/

15. Over the last few years, has there been anyone besides (you/you and your husband) who has regularly helped make these kinds of decisions for your (farm/ranch)?

Yes .... (ASK A)	1	33/
No	2	

A. IF YES: Who is that? (CODE ALL THAT APPLY)

Male relative	1	34/
Female relative	2	35/
Male non-relative	3	36/
Female non-relative	4	37/

---

16. In general, thinking about the part you have in making decisions for the operation of this (farm/ranch), do you feel that you have too much responsibility for these decisions, or would you like to take a greater part in making these decisions?

	Too much responsibility	1	38/
(IF VOLUNTEERED)	About right amount	2	
	Would like greater part	3	
	Don't know	8	

---

17. ASK ONLY IF HUSBAND IN HOUSEHOLD. IF NO HUSBAND, GO TO Q. 18.

A. If something should happen to your husband, could you continue to run the operation on your own? (PROBE: Would you say definitely yes, probably yes, probably no, or definitely no?)

Definitely yes	1	39/
Probably yes	2	
Probably no	3	
Definitely no	4	
Don't know	8	

18. We'd like to know something about your feelings toward several aspects of your life today, such as your community, your work, your family, and so on.

First, how satisfied are you with (farming/ranching) as a way of life--are you very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied? REPEAT FOR EACH ITEM BELOW.

	Very satisfied	Somewhat satisfied	Somewhat dis-satisfied	Very dis-satisfied	Don't know	
A. Farming/ranching as a way of life?	1	2	3	4	8	40/
B. The community where you live?	1	2	3	4	8	41/
C. Farming/ranching as a way to make a living?	1	2	3	4	8	42/
D. State or local government programs and services to farmers and ranchers	1	2	3	4	8	43/
E. USDA programs and services to farmers and ranchers	1	2	3	4	8	44/
F. USDA programs and services for farm women	1	2	3	4	8	45/

PART III

19. Is your (farm/ranch) on file with the local office of the Agricultural Stabilization and Conservation Service, or ASCS?

Yes .... (ASK A)	1	46/
No .... (ASK B)	2	
Don't know ..(ASK B)	8	

A. IF YES: Is your own name listed as an owner, an operator, or a producer in the ASCS file?

Yes ...... (GO TO Q. 20)......	1	47/
No .... (ASK B)	2	
Don't know ...(ASK B)	8	

B. IF NO OR DK TO A: Have you ever tried to get your own name listed in the ASCS file?

Yes	1	48/
No	2	

20. Next we'd like to find out something about any experiences you or other members of your household may have had with some of the programs run by the U.S. Department of Agriculture.

The first program is usually referred to as the Price Support Program, or Commodity Loan Program. It is administered by the Agricultural Stablization and Conservation Service or ASCS.

IF NECESSARY:

Under this program, growers of wheat, corn, sorghum, barley, soybeans, rice, or cotton can receive government loans while they decide how to market their products. Program participants may choose to sell their products to the government, keeping the loan amount as payment. They may also receive deficiency payments for their crops if market prices do not reach a specified target price.

A. Have you ever heard about the Price Support Program before now?

Yes .... (ASK B AND C)	1	49/
No .... (SKIP TO Q. 21)	2	
Not sure, don't know . (SKIP TO Q. 21) .	8	

B. How familiar are you personally with this program and the requirements for participating in it? Are you very familiar with it, somewhat familiar, or not familiar with it at all?

Very familiar	1	50/
Somewhat familiar	2	
Not familiar at all	3	
Not sure, don't know	8	

C. In the last two or three years, has your (farm/ranch) tried to participate in this program?

Yes .... (SKIP TO F)	1	51/
No .... (ASK D)	2	
Don't know . (SKIP TO Q. 21)	8	

D. What is the main reason why your (farm/ranch) has not tried to participate in this program in the last two or three years? Is it because your (farm/ranch) is not eligible for the program or because you do not need it, or is there some other reason?

Not eligible . (SKIP TO Q. 21)	1	52/
No need ...... (SKIP TO Q. 21)	2	
Other reason .... (ASK E)	3	
Don't know ... (SKIP TO Q. 21)	8	

E. Please tell me what that reason is. RECORD VERBATIM. 53-54/

GO TO Q. 21

20. (Continued)

F. In the past two or three years, did you try to file any of the required forms in your own name and your name only?

Yes	(SKIP TO I)	1	55/
No	(ASK G)	2	

G. In the past two or three years, did your name appear on any required forms along with someone else?

Yes	(SKIP TO I)	1	56/
No	(ASK H)	2	

H. Who filed the most recent forms for this program?

Husband, son, other male	(GO TO I) .	1	57/
Daughter, sister, other female	(GO TO I) .	2	
Don't know, not sure	(GO TO I) .	3	

I. The last time you (you/someone from your operation) tried to participate, did you actually receive the loan or any other payments?

Yes	(GO TO K)	1	58/
No	(GO TO J)	2	
Still pending	(GO TO K)	3	
Don't know, don't remember ..	(GO TO K)	8	

J. IF NO TO I: Was this mainly because you did not meet the program requirements, or because you decided you didn't want the loan, or was there some other reason?

Didn't meet requirements	1	59/
Didn't want the loan	2	
Some other reason	3	
Don't know	8	

K. All in all, do you think your case was treated fairly or unfairly?

Fairly	(SKIP TO Q. 21)	1	60/
Unfairly	(ASK L)	2	
Not sure, don't know ..	(ASK L)	8	

L. IF UNFAIRLY: In what way do you think you (were/might have been) treated unfairly? RECORD VERBATIM.

61-62/

21. During the last two or three years, have you yourself had any business contacts with ASCS people?

Yes .... (ASK A) 1 63/
No ...... (GO TO Q. 22) 2

A. IF YES: In general, were you satisfied or dissatisfied with the way you were treated by ASCS personnel?

Satisfied. (GO TO Q. 22) 1 64/
Dissatisfied .. (ASK B) 2
Don't know . (GO TO Q. 22) 8

B. IF DISSATISFIED: In what way were you dissatisfied with the treatment you received? RECORD VERBATIM.

65-66/

22. Next, we'd like to ask about your experiences with a program run by the Soil Conservation Service or SCS through Soil Conservation Districts. The program is called Conservation Operations, and it provides farm and ranch operators with technical advice to deal with a wide variety of conservation problems. It does not provide either loans, cash grants, or cost-share payments.

IF NECESSARY:

This program provides technical assistance in planning, designing, and laying out conservation practices that deal with erosion control, sediment reduction, water conservation, and so on. Operators who take part in this program are usually asked to become Cooperators with the local Soil Conservation District.

A. Have you ever heard about this conservation assistance service before now?

Yes .... (ASK B AND C)	1	67/
No .... (SKIP TO Q. 23)	2	
Not sure, don't know (SKIP TO Q. 23)	8	

B. How familiar are you personally with this service and the procedures for obtaining it? Are you very familiar with it, somewhat familiar, or not familiar with it at all?

Very familiar	1	68/
Somewhat familiar	2	
Not familiar at all	3	
Not sure, don't know	8	

C. In the last two or three years, has your (farm/ranch) requested assistance under this program?

Yes .... (SKIP TO F)	1	69/
No .... (ASK D)	2	
Don't know . (SKIP TO Q. 23)	8	

D. What is the main reason why your (farm/ranch) has not requested assistance in the last two or three years? Is it because your (farm/ranch) is not eligible for this program or because you do not need it, or is there some other reason?

Not eligible .. (SKIP TO Q. 23) ..	1	70/
No need .... (SKIP TO Q. 23) ..	2	
Other reason ..... (ASK E)	3	
Don't know .... (SKIP TO Q. 23) ..	8	

E. Please tell me what that reason is. RECORD VERBATIM.

71-72/

GO TO Q. 23

BEGIN
DECK 04

22. (Continued)

F. In the past two or three years, did you request these services in your own name and your name only?

Yes	(SKIP TO I)	1	09/
No	(ASK G)	2	

G. In the past two or three years, did you request these services jointly with someone else?

Yes	(SKIP TO I)	1	10/
No	(ASK H)	2	

H. Who made the most recent request for these services?

Husband, son, other male	(GO TO I)	1	11/
Daughter, sister, other female	(GO TO I)	2	
Don't know, not sure	(GO TO I)	8	

I. The last time (you/someone from your operation) requested assistance, did you receive the service you wanted?

Yes	(GO TO J)	1	12/
No	(SKIP TO K)	2	
Still pending	(SKIP TO K)	3	
Don't know, don't remember	(SKIP TO K)	8	

J. Did the technical assistance help you solve your conservation problem?

Yes	1	13/
No	2	
Not sure, don't know	8	

22. (Continued)

K. All in all, do you think your case was treated fairly or unfairly?

Fairly ..... (SKIP TO Q. 23) 1 14/
Unfairly .... (ASK L) 2
Not sure,
don't know .... (ASK L) 8

L. IF UNFAIRLY: In what way do you think you (were/might have been) treated unfairly? RECORD VERBATIM.

15-16/

---

23. During the past two or three years, have you yourself had any business contacts with people from the Soil Conservation Office in your area?

Yes .... (ASK A) 1 17/
No .... (GO TO Q. 24) 2

A. IF YES: In general, were you satisfied or dissatisfied with the way you were treated by personnel from the Soil Conservation Office?

Satisfied .... (GO TO Q. 24) 1 18/
Dissatisfied .... (ASK B) 2
Don't know ... (GO TO Q. 24) 8

B. IF DISSATISFIED: In what way were you dissatisfied with the treatment you received? RECORD VERBATIM.

19-20/

24. Now a question about the Farmers Home Administration or FmHA. As you may know, FmHA administers many different loan programs for farmers and ranchers. Some examples are farm ownership or farm operating loans, rural housing loans, disaster loans, and small business loans.

IF NECESSARY:

FmHA provides both financing and technical assistance to help operators purchase or enlarge farms or ranches, to buy or improve their housing, to cover operating expenses, organize businesses, set up conservation practices, and to recover from natural disasters or other economic emergencies.

A. Have you ever heard about any of the FmHA loan programs for farmers and ranchers before now?

Yes .... (ASK B AND C) 1 21/
No .... (SKIP TO Q. 25) 2
Not sure,
don't know (SKIP TO Q. 25) 8

B. How familiar are you personally with FmHA loan programs and their eligibility requirements? Are you very familiar with them, somewhat familiar, or not familiar with them at all?

Very familiar 1 22/
Somewhat familiar 2
Not familiar at all 3
Don't know 8

C. In the last two or three years, has your (farm/ranch) applied for an FmHA loan?

Yes .... (SKIP TO F) 1 23/
No .... (ASK D) 2
Don't know... (SKIP TO Q. 25) 8

D. What is the main reason why your (farm/ranch) has not applied for any FmHA loans in the last two or three years? Is it because your (farm/ranch) is not eligible for these loans, because you did not need them, or is there some other reason?

Not eligible .. (SKIP TO Q. 25) .. 1 24/
Not needed .... (SKIP TO Q. 25) .. 2
Other reason ..... (ASK E) 3
Don't know .... (SKIP TO Q. 25) .. 8

E. Please tell me what that reason is. RECORD VERBATIM.

25-26/

GO TO Q. 25

24. (Continued)

F. In the past two or three years, did you apply for an FmHA loan in your own name and your name only?

Yes .... (SKIP TO I) 1 27/
No .... (ASK G) 2

G. In the past two or three years, have you signed your name as a co-applicant for a loan along with someone else?

Yes .... (SKIP TO I) 1 28/
No .... (ASK H) 2

H. Who made the most recent application for an FmHA loan?

Husband, son, other male .... (GO TO I) 1 29/
Daughter, sister, other female .. (GO TO I) 2
Don't know, not sure .... (GO TO I) 8

I. The last time (you/someone from your operation) applied in this way, were you found to be eligible for the loan or not?

Yes, eligible .... (ASK J) 1 30/
No, not eligible .... (SKIP TO K) 2
Still pending .... (SKIP TO K) 3
Don't know .... (SKIP TO K) 8

J. IF ELIGIBLE: And did you finally receive the loan?

Yes 1 31/
No 2
Still pending 3
Don't know 8

K. Which of the following types of loans was this? READ CATEGORIES.

A farm ownership loan 1 32/
A farm operating loan 2
A disaster loan 3
An economic emergency loan 4
A housing loan 5
Or some other type of FmHA loan .. 6
(IF VOLUNTEERED) Don't know 8

24. (Continued)

L. All in all, do you think your case was treated fairly or unfairly?

Fairly ..... (SKIP TO Q. 25) 1 33/
Unfairly .... (ASK M) 2
Not sure,
don't know .... (ASK M) 8

M. IF UNFAIRLY: In what way do you think you (were/might have been) treated unfairly? RECORD VERBATIM.

34-35/

---

25. During the last two or three years, have you yourself had any business contact with people from FmHA?

Yes .... (ASK A) 1 36/
No .... (GO TO Q. 26) 2

A. IF YES: In general, were you satisfied or dissatisfied with the way you were treated by FmHA personnel?

Satisfied .... (GO TO Q. 26) 1 37/
Dissatisfied .... (ASK B) 2
Don't know ... (GO TO Q. 26) 8

B. IF DISSATISFIED: In what way were you dissatisfied with the treatment you received? RECORD VERBATIM.

38-39/

26. We'd also like to know about any experiences you may have had with programs or activities run by the Extension Service in your area. In the last two or three years have you personally been involved with any of the following Extension Service activities:

	Yes	No	
A. Classes or other activities on agricultural production?	1	2	40/
B. Classes or other activities on farm or ranch management?	1	2	41/
C. Homemaker clubs or other activities on family living?	1	2	42/
D. Classes or other activities on inheritance laws or estate planning?	1	2	43/
E. Any activities on food or nutrition?	1	2	44/
F. 4-H or other youth activities?	1	2	45/
G. Discussing specific problems of your operation with an extension agent or staff member?	1	2	46/
H. Getting information about other USDA programs or services?	1	2	47/

27. Have you ever tried to participate in any of these activities and felt that you were discouraged from doing so by Extension personnel?

Yes 1 48/
No 2

28. In the past two or three years, have you yourself had any business contact with Extension personnel?

Yes .... (ASK A) 1 49/
No .... (SKIP TO Q. 29) 2
Don't recall . (SKIP TO Q. 29) 8

A. IF YES: In general, were you satisfied or dissatisfied with the way you were treated by Extension Service personnel?

Satisfied ... (GO TO Q. 29) 1 50/
Dissatisfied ... (ASK B) 2
Don't know ... (GO TO Q. 29) 8

B. IF DISSATISFIED: In what way were you dissatisfied with the treatment you received? RECORD VERBATIM.

51-52/

29. Have you ever been involved in any committees or groups that helped to develop or carry out Extension programs in your area? (PROBE: Some examples are education programs, 4-H activities, home economics programs, and so forth.)

Yes	1	53/
No	2	
Don't know, don't recall	8	

---

30. Have you ever served as a member of any official committee, advisory board, panel, or other group connected with the U.S. Department of Agriculture?

Yes	1	54/
No	2	

---

31. Have you ever served on any committee, advisory board, panel or other group concerned with agricultural matters in your state, county, or local government?

Yes	1	55/
No	2	

---

32. In the future, if you were asked to serve on, or run for election to an official committee or group of this kind, do you think you would definitely agree to do it, that you would probably agree, probably not agree, or definitely not agree to do it?

Definitely agree	1	56/
Probably agree	2	
Probably not agree	3	
Definitely not agree	4	
Don't know	8	

33. Next, we would like to know about your membership in farm organizations. For each of the following organizations, please tell me whether you personally have been a member at any time during the last two or three years.

First, how about marketing cooperatives?

	Yes	No	Don't Know	
A. Marketing cooperative?	1	2	8	57/
B. Farm supply cooperative?	1	2	8	58/
C. Any general farm organization, such as the Grange, Farm Bureau, National Farmers Union, or American Agricultural Movement?	1	2	8	59/
D. Any women's auxiliaries of general farm organizations, such as Farm Bureau Women?	1	2	8	60/
E. Any commodity producers' associations, such as the American Dairy Association, or National Wheat Producers Association?	1	2	8	61/
F. Any women's auxiliaries of commodity organizations, such as the Cowbelles or the Wheathearts?	1	2	8	62/
G. Any women's farm organizations, such as United Farm Wives, American Agri-Women, or Women Involved in Farm Economics?	1	2	8	63/
H. Any community organizations, such as a church group, PTA, League of Women Voters, and so forth?	1	2	8	64/

34. During the past two or three years, were you appointed or elected to serve on a local governing board, such as a school board, town council, or county board, and so forth?

Yes	1	65/
No	2	
Don't know	8	

PART IV

35. Please tell me, in what year were you born?

1				66-68/

(YEAR)

---

36. Which one of these categories do you consider yourself. READ CATEGORIES.

American Indian or Alaskan Native ..	1	69/
Asian or Pacific Islander	2	
Black .... (ASK A)	3	
White ....(ASK A)	4	

A. Do you consider yourself to be of Hispanic origin?

IF NECESSARY:
By Hispanic origin, we mean having ancestors of Mexican, Puerto Rican, Central or South American or other Spanish origins.

Yes	1	70/
No	2	

BEGIN
DECK 05

37. Please tell me who else usually lives in this household. I don't need their names, but tell me their relationship to you. RECORD RELATIONSHIPS ON LINES BELOW. USE A SEPARATE LINE FOR EACH PERSON. FOR EACH CHILD LISTED ASK: And what is (his/her) age?

---

38. Which of the persons living here are regularly involved in the day-to-day work on this (farm/ranch)? Do not count those who help out only occasionally or for very short periods. CODE YES OR NO FOR EACH PERSON LISTED.

Q. 37 LIVE IN HOUSEHOLD RELATIONSHIP:		AGE OF EACH CHILD		Q. 38 INVOLVED IN DAY-TO-DAY WORK		
1) ____________	09-10/		11-12/	Yes... 1	No... 2	13/
2) ____________	14-15/		16-17/	Yes... 1	No... 2	18/
3) ____________	19-20/		21-22/	Yes... 1	No... 2	23/
4) ____________	24-25/		26-27/	Yes... 1	No... 2	28/
5) ____________	29-30/		31-32/	Yes... 1	No... 2	33/
6) ____________	34-35/		36-37/	Yes... 1	No... 2	38/
7) ____________	39-40/		41-42/	Yes... 1	No... 2	43/
8) ____________	44-45/		46-47/	Yes... 1	No... 2	48/
9) ____________	49-50/		51-52/	Yes... 1	No... 2	53/
10) ____________	54-55/		56-57/	Yes... 1	No... 2	58/
11) ____________	59-60/		61-62/	Yes... 1	No... 2	63/

---

39. Altogether, how many hired hands are employed on this operation? Please include part-time as well as full-time help. IF NONE, ENTER ZEROS.

☐☐☐ 64-66/
NO. OF
HIRED HANDS

40. Are there any other people who do not usually live in the household, but who are involved in the day-to-day work on this (farm/ranch)?

Yes ..... (ASK A)	1	67/
No	2	

A. IF YES: How many are there? PROBE FOR BEST ESTIMATE.

☐☐☐ 68-70/

Number

---

41. IF EVER MARRIED: Altogether how many children have you had? Please include any stepchildren or adopted children. ENTER NUMBER IN BOX.

IF NONE, CODE "00" AND GO TO Q. 42.

OF CHILDREN: ☐☐ 71-72/

---

42. What is the highest grade you finished in school?

1 - 8th grade	01	73-74/
9 - 11th grade	02	
12th grade or high school equivalent	03	
Vocational school beyond high school	04	
Some college	05	
Bachelor's degree	06	
M.A., M.S., other Master's degree	07	
Ph.D., M.D., other professional degree ...	08	

BEGIN
DECK 06

43. Have you ever held a job for pay outside the home and farm?

Yes 1 09/
No .... (SKIP TO Q. 45) 2

---

44. Do you currently have a job for pay outside home or farm work?

Yes .... (SKIP TO Q. 46) 1 10/
No .... (ASK A) 2

A. IF NO: In what year did you leave your last job? ☐☐ (YEAR) 11-12/

---

45. Are you looking for work now or do you intend to start looking for work outside your (farm/ranch) operation during the next 12 months?

Yes 1 13/
No 2
Don't know 8

IF Q. 43 IS "NO" OR IF Q. 44A IS 1977 OR BEFORE, SKIP TO Q. 47.

---

46. CHOOSE
IF CURRENTLY EMPLOYED: We'd like to know a bit about this job. (IF MORE THAN ONE: The job at which you spend the most hours.)
IF EMPLOYED '78-'80: We'd like to know a bit about the last job you had.

A. What kind of work (do/did) you normally do on that job?
PROBE: What is the job called? What (are/were) the main duties?

OFFICE USE ONLY
☐☐☐ 14-16/
☐☐ 17-18/

B. What kind of place (do/did) you work for? PROBE: What do they make or do?

OFFICE USE ONLY
☐☐☐ 19-21/

C. How many hours a week (do/did) you usually spend on the job?

HOURS: ☐☐ 22-23/

46. (Continued)

D. What is the main reason you (have/had) an off-(farm/ranch) job? (Is/was) it mainly to keep up and use your career skills, mainly to get out of the house and see other people, or because you needed the money? PROBE FOR MAIN REASON.

Keep up, use skills	1	24/
Get out of house, see people	2	
Need the money ... (ASK E)	3	
Other (SPECIFY) ________________________ ...	4	

E. IF NEED THE MONEY: Do you need the money mainly for farm-related expenses, or do you need it mainly for other things?

	Farm-related expenses	1	25/
	Other things	2	
(IF VOLUNTEERED)	Both equally	3	
	Don't know	8	

F. Altogether, how much money did you earn before taxes in 1979 from (off-farm/off-ranch) jobs? PROBE FOR BEST ESTIMATE: ROUND TO NEAREST THOUSAND DOLLARS.

$ ☐☐☐,000 26-28/

---

47. On your income tax forms, what do you put down as your occupation? DO NOT READ CATEGORIES.

Wife, mother, housewife	1	29/
Farm wife	2	
Farmer, rancher	3	
Other (SPECIFY) ________________________ ..	4	
Don't know	8	

48. Does your own name ever appear on checks received in payment for any (farm/ranch) products sold?

Yes	1	30/
No	2	

---

49. We'd like to know if you have any of the following financial arrangements.

A. First, do you have a savings or checking account in your name alone?

Yes	1	31/
No	2	

B. Do you have a joint savings or checking account with someone else?

Yes	1	32/
No	2	

C. Do you have any credit cards or charge accounts in your own name?

Yes	1	33/
No	2	

D. Do you have any joint charge accounts with someone else?

Yes	1	34/
No	2	

E. Have you had any loans from banks or other lending institutions in your own name?

Yes	1	35/
No	2	

F. Have you had any joint loans with anyone else?

Yes	1	36/
No	2	

G. Have you paid enough into Social Security to qualify for benefits in your own name?

Yes	1	37/
No	2	
Don't know	8	

50. IF MARRIED: Altogether, about how much money did your husband earn before taxes in 1979 from (off-farm/off-ranch) jobs? PROBE FOR BEST ESTIMATE; ROUND OFF TO NEAREST THOUSAND DOLLARS.

$ ☐☐☐, 0 0 0 38-40/

---

51. And how much net farm income did (you/you and your husband) earn in 1979 before taxes, but after production expenses are subtracted? PROBE FOR BEST ESTIMATE; ROUND TO NEAREST THOUSAND DOLLARS.

$ ☐☐☐, 0 0 0 41-43/

---

52. A. In rough figures, what is the total value of your (farm/ranch) operation today? Please include the value of all land, animals, machinery and other assets.
(PROBE FOR BEST ESTIMATE. ROUND TO NEAREST THOUSAND DOLLARS.)

$ ☐, ☐☐☐, 0 0 0 44-47/

IF "DON'T KNOW," CODE 9898.
IF REFUSED, CODE 9797.

B. And what is the total debt for your operation today, including all mortgages for farm or ranch property, and other loans for machinery, animals or other things? (PROBE FOR BEST ESTIMATE. ROUND TO NEAREST THOUSAND DOLLARS.)

$ ☐, ☐☐☐, 0 0 0 48-51/

IF "DON'T KNOW," CODE 9898.
IF REFUSED, CODE 9797.

---

53. And now just two final questions:

What do you think is the most important thing the U.S. Department of Agriculture could do to help farm and ranch people? RECORD VERBATIM. PROBE FOR MOST IMPORTANT.

52-53/

54. Finally, what do you think is the most important thing that the U.S. Department of Agriculture could do to help farm and ranch women? RECORD VERBATIM. PROBE FOR RESPONSE FOCUSING ON HELP SPECIFICALLY FOR WOMEN. PROBE FOR MOST IMPORTANT.

54-55/

56/R

TIME ENDED: ____________ AM PM

NORC-4301
6/80
OMB 40-S-80019

National Opinion Research Center
University of Chicago

SURVEY OF FARM WOMEN

(SUPPLEMENTARY MALE SAMPLE)

MEN'S QUESTIONNAIRE

CASE ID:	☐☐☐☐	01-07/
HOUSEHOLD ID:	☐☐☐☐	09-15/
		17-20/'4301'

SUMMARY FROM RECORD OF CALLS

CODE RESPONDENT'S SEX:

Male	1	57/
Female	2	

DID RESPONDENT EVER TEMPORARILY REFUSE OR BREAKOFF INTERVIEW?

Yes	1	58/
No	2	

ENTER TOTAL NUMBER OF PHONE CALLS REQUIRED TO COMPLETE INTERVIEW:

☐☐ 59-60/

CODE DAY OF WEEK THAT INTERVIEW WAS COMPLETED:

Monday	1	61/
Tuesday	2	
Wednesday	3	
Thursday	4	
Friday	5	
Saturday	6	
Sunday	7	

ENTER TIME OF DAY INTERVIEW WAS COMPLETED (USE 24 HOUR TIME NOTATION, THAT IS, 5:30 PM = 1730; ENTER TIME INTERVIEW WAS STARTED):

☐☐☐☐ 62-65/

ENTER LENGTH OF INTERVIEW IN MINUTES:

☐☐☐ 66-68/

WAS THERE EVER ANY DIFFICULTY IN IDENTIFYING THE PROPER RESPONDENT FOR THIS HOUSEHOLD?

Yes	1	69/
No	2	

CODE SEX OF INTERVIEWER WHO COMPLETED INTERVIEW:

Male	1	70/
Female	2	

CHECK BOX IF RESPONDENT BELONGS TO A "TWO-INTERVIEW HOUSEHOLD" BUT ONLY ONE INTERVIEW WAS COMPLETED .... ☐ 71/

NORC-4301
6/80

DECK 11

TIME BEGAN: ________ AM PM

MALE QUESTIONNAIRE

PART I

1. First, do you usually refer to your operation as a farm or as a ranch?

Farm	1	30/
Ranch	2	
Other (SPECIFY) ________	3	

2. ASK ONLY WHEN WIFE HAS NOT BEEN INTERVIEWED OR THERE IS NO WIFE. (SEE FACE SHEET.)
Are you currently widowed, divorced, separated, or have you never been married?

(IF VOLUNTEERED)	Married	1	31/
	Widowed	2	
	Divorced	3	
	Separated	4	
	Never married	5	

3. Altogether, how many years have you lived or worked on a farm or ranch? 32-33/R
IF "All my life," PROBE: About how many years would that be?

ENTER NUMBER OF YEARS: ☐☐ 34-35/

4. Altogether, about how many total acres are there in your (farm/ranch)?
Please include acres you own or lease or rent from other people.

ENTER NUMBER OF ACRES: ☐☐☐☐☐☐ 36-41/

5. Altogether, how many cropland acres are you operating this year? 42-45/R
Please include all owned and rented land planted to crops.

ENTER NUMBER OF ACRES: ☐☐☐☐☐☐ 46-51/

IF NO CROPLAND ACRES, CODE "0" AND GO TO Q. 8, NEXT PAGE.

6. What are your main crops? CODE FIRST FIVE CROPS MENTIONED.

Alfalfa (hay or seeds)	01	Rice	17	52-53/
Barley	02	Rye	18	54-55/
Beans (dry)	03	Seeds	19	56-57/
Citrus fruits	04	Sorghum (all types)	20	58-59/
Corn (all types)	05	Soybeans	21	60-61/
Cotton, cotton products ...	06	Spring wheat	22	
Durum wheat	07	Sugar beets	23	
Flaxseed	08	Sugar cane	24	
Fruits (non-citrus)	09	Sweet potatoes	25	
Hay (other)	10	Tobacco (all types)	26	
Hops	11	Vegetables	27	
Oats	12	Winter (fall planted) wheat	28	
Peanuts	13	Other (SPECIFY) ________	29	
Peas (dry)	14			
Pecans	15			
Potatoes	16			

7. If we consider your total gross sales of farm products as adding up to 100%, about what percentage of your total sales would you say comes from crops, as opposed to livestock or animal products?

☐☐☐ 62-64/
(Percent)

Don't know 998

IF 100%, SKIP TO Q. 9.

IF LESS THAN 100%, PROBE: So that leaves about (100 MINUS ABOVE) percent of your total gross sales in livestock or animal products--right? IF NO, CORRECT ABOVE FIGURE OR WRITE IN EXPLANATION.

---

8. What are the main kinds of livestock, poultry, fish, or other animal products you are producing for sale this year?
CODE ALL MENTIONED.

FOR EACH KIND OF LIVESTOCK OR ANIMAL MENTIONED, ASK A:
A. In rough figures, what was the largest number of (KIND OF ANIMAL) you had on hand at any one time last year?

Beef cattle (include calves, feeder cattle and finished cattle)	01	65-66/	☐☐☐☐☐	67-71/
Dairy cattle including calves (milk, cheese, etc.)	02	09-10/	☐☐☐☐☐	BEGIN DECK 12 11-15/
Hogs, pigs	03	16-17/	☐☐☐☐☐	18-22/
Horses	04	23-24/	☐☐☐☐☐	25-29/
Sheep, lambs	05	30-31/	☐☐☐☐☐	32-36/
Broilers (chickens)	06	37-38/	☐☐☐☐☐	39-43/
Layers (chickens, eggs)	07	44-45/	☐☐☐☐☐	46-50/
All other poultry (turkeys, ducks, geese, etc.)....	08	51-52/	☐☐☐☐☐	53-57/
Fish or other aquaculture products	09	58-59/	☐☐☐☐☐	60-64/
Other (SPECIFY) ____________________	10	65-66/	☐☐☐☐☐	67-71/
None	90	72-73/		

BEGIN DECK 13

PART II

9. ASK ONLY IF WIFE IN HOUSEHOLD. IF NO WIFE, GO TO Q. 10.

Now I have some questions about the kinds of work your wife may do that contribute to the operation of your (farm/ranch). If a particular type of work doesn't apply to your operation, please be sure to tell me and we'll go on to the next one.

First is plowing, disking, cultivating, or planting. Over the last two or three years has this been one of her regular duties, something she helps with occasionally, something she never does, or something that's not done on your (farm/ranch)? REPEAT FOR EACH ITEM BELOW.

	Regular Duty	Occasionally	Never	Not Done	
A. Plowing, disking, cultivating or planting	1	2	3	4	09/
B. Applying fertilizers, herbicides, or insecticides	1	2	3	4	10/
C. Doing other field work without machinery	1	2	3	4	11/
D. Harvesting crops or other products, including running machinery or trucks	1	2	3	4	12/
E. Taking care of farm animals, including herding or milking dairy cattle	1	2	3	4	13/
F. Running farm errands, such as picking up repair parts or supplies	1	2	3	4	14/
G. Making major purchases of farm or ranch supplies and equipment	1	2	3	4	15/
H. Marketing your products--that is, dealing with wholesale buyers or selling directly to consumers	1	2	3	4	16/
I. Bookkeeping, maintaining records, paying bills, or preparing tax forms for the operation	1	2	3	4	17/
J. Doing household tasks like preparing meals, housecleaning, and so on	1	2	3	4	18/
K. Supervising the farm work of other family members	1	2	3	4	19/
L. Supervising the work of hired farm labor	1	2	3	4	20/
M. Taking care of a vegetable garden or animals for family consumption	1	2	3	4	21/
N. Looking after children	1	2	3	4	22/
O. Working on a family or in-home business other than farm or ranch work	1	2	3	4	23/

10. I'd like to ask you about how you make different types of decisions for your (farm/ranch). For each one, please tell me whether you usually make the decision, (your wife/someone else) makes the decision, or you make the decision together with (your wife/someone else).

If I describe a situation that has never come up, please be sure to tell me and we'll go on to the next item.

First, who usually makes final decisions about . . .	Usually respondent	Usually wife/ someone else	Both together	Don't know	NA	
A. Whether to buy or sell land?	1	2	3	8	4	24/
B. Whether to rent more or less land?	1	2	3	8	4	25/
C. Whether to buy major household appliances?	1	2	3	8	4	26/
D. Whether to buy major farm equipment?	1	2	3	8	4	27/
E. Whether to produce something new such as a new crop or a new breed or type of livestock?	1	2	3	8	4	28/
F. When to sell your products?	1	2	3	8	4	29/
G. When to make household repairs?	1	2	3	8	4	30/
H. Whether to try a new production practice?	1	2	3	8	4	31/
I. Whether you take a job off the (farm/ranch)?	1	2	3	8	4	32/

11. Over the last few years, has there been anyone besides (you/you and your wife) who has regularly helped make these kinds of decisions for your (farm/ranch)?

Yes .... (ASK A) 1 33/
No 2

A. IF YES: Who is that? (CODE ALL THAT APPLY)

Male relative 1 34/
Female relative 2 35/
Male non-relative 3 36/
Female non-relative 4 37/

12. ASK ONLY IF WIFE IN HOUSEHOLD. IF NO WIFE, GO TO Q. 13. 38/R

If something should happen to your wife, could you continue to run the operation on your own? (PROBE: Would you say definitely yes, probably yes, probably no, or definitely no?)

Definitely yes	1	39/
Probably yes	2	
Probably no	3	
Definitely no	4	
Don't know	8	

---

13. We'd like to know something about your feelings toward several aspects of your life today, such as your community, your work, your family, and so on.

First, how satisfied are you with (farming/ranching) as a way of life--are you very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied? REPEAT FOR EACH ITEM BELOW.

	Very satisfied	Somewhat satisfied	Somewhat dis-satisfied	Very dis-satisfied	Don't know	
A. Farming/ranching as a way of life?	1	2	3	4	8	40/
B. The community where you live?	1	2	3	4	8	41/
C. Farming/ranching as a way to make a living?	1	2	3	4	8	42/
D. State or local government programs and services to farmers and ranchers	1	2	3	4	8	43/
E. USDA programs and services to farmers and ranchers	1	2	3	4	8	44/

PART III

45/R

14. Is your (farm/ranch) on file with the local office of the Agricultural Stabilization and Conservation Service, or ASCS?

Yes .... (ASK A)	1	46/
No .... (ASK B)	2	
Don't know ..(ASK B)	8	

A. IF YES: Is your own name listed as an owner, an operator, or a producer in the ASCS file?

Yes ...... (GO TO Q. 15)......	1	47/
No .... (ASK B)	2	
Don't know ...(ASK B)	8	

B. IF NO OR DK TO A: Have you ever tried to get your own name listed in the ASCS file?

Yes	1	48/
No	2	

15. Next we'd like to find out something about any experiences you or other members of your household may have had with some of the programs run by the U.S. Department of Agriculture.

The first program is usually referred to as the Price Support Program, or Commodity Loan Program. It is administered by the Agricultural Stablization and Conservation Service or ASCS.

IF NECESSARY:

Under this program, growers of wheat, corn, sorghum, barley, soybeans, rice, or cotton can receive government loans while they decide how to market their products. Program participants may choose to sell their products to the government, keeping the loan amount as payment. They may also receive deficiency payments for their crops if market prices do not reach a specified target price.

A. Have you ever heard about the Price Support Program before now?

Yes .... (ASK B AND C)	1	49/
No .... (SKIP TO Q. 16)	2	
Not sure, don't know . (SKIP TO Q. 16).	8	

B. How familiar are you personally with this program and the requirements for participating in it? Are you very familiar with it, somewhat familiar, or not familiar with it at all?

Very familiar	1	50/
Somewhat familiar	2	
Not familiar at all	3	
Not sure, don't know	8	

C. In the last two or three years, has your (farm/ranch) tried to participate in this program?

Yes .... (SKIP TO F)	1	51/
No .... (ASK D)	2	
Don't know . (SKIP TO Q. 16)	8	

D. What is the main reason why your (farm/ranch) has not tried to participate in this program in the last two or three years? Is it because your (farm/ranch) is not eligible for the program or because you do not need it, or is there some other reason?

Not eligible . (SKIP TO Q. 16)	1	52/
No need ...... (SKIP TO Q. 16)	2	
Other reason .... (ASK E)	3	
Don't know ... (SKIP TO Q. 16)	8	

E. Please tell me what that reason is. RECORD VERBATIM.

53-54/

GO TO Q. 16

15. (Continued)

F. In the past two or three years, did you try to file any of the required forms in your own name and your name only?

Yes	(SKIP TO I)	1	55/
No	(ASK G)	2	

G. In the past two or three years, did your name appear on any required forms along with someone else?

Yes	(SKIP TO I)	1	56/
No	(ASK H)	2	

H. Who filed the most recent forms for this program?

Brother, son, other male	(GO TO I)	1	57/
Wife, daughter, other female	(GO TO I)	2	
Don't know, not sure	(GO TO I)	3	

I. The last time you (you/someone from your operation) tried to participate, did you actually receive the loan or any other payments?

Yes	(GO TO K)	1	58/
No	(GO TO J)	2	
Still pending	(GO TO K)	3	
Don't know, don't remember	(GO TO K)	8	

J. IF NO TO I: Was this mainly because you did not meet the program requirements, or because you decided you didn't want the loan, or was there some other reason?

Didn't meet requirements	1	59/
Didn't want the loan	2	
Some other reason	3	
Don't know	8	

K. All in all, do you think your case was treated fairly or unfairly?

Fairly	(SKIP TO Q. 16)	1	60/
Unfairly	(ASK L)	2	
Not sure, don't know	(ASK L)	8	

L. IF UNFAIRLY: In what way do you think you (were/might have been) treated unfairly? RECORD VERBATIM.

61-62/

16. During the last two or three years, have you, yourself had any business contacts with ASCS people?

Yes .... (ASK A)	1	63/
No ...... (GO TO Q. 17)	2	

A. IF YES: In general, were you satisfied or dissatisfied with the way you were treated by ASCS personnel?

Satisfied. (GO TO Q. 17)	1	64/
Dissatisfied .. (ASK B)	2	
Don't know . (GO TO Q. 17)	8	

B. IF DISSATISFIED: In what way were you dissatisfied with the treatment you received? RECORD VERBATIM.

65-66/

17. Next, we'd like to ask about your experiences with a program run by the Soil Conservation Service or SCS through Soil Conservation Districts. The program is called Conservation Operations, and it provides farm and ranch operators with technical advice to deal with a wide variety of conservation problems. It does not provide either loans, cash grants, or cost-share payments.

IF NECESSARY:

This program provides technical assistance in planning, designing, and laying out conservation practices that deal with erosion control, sediment reduction, water conservation, and so on. Operators who take part in this program are usually asked to become Cooperators with the local Soil Conservation District.

A. Have you ever heard about this conservation assistance service before now?

Yes .... (ASK B AND C)	1	67/
No .... (SKIP TO Q. 18)	2	
Not sure, don't know (SKIP TO Q. 18)	8	

B. How familiar are you personally with this service and the procedures for obtaining it? Are you very familiar with it, somewhat familiar, or not familiar with it at all?

Very familiar	1	68/
Somewhat familiar	2	
Not familiar at all	3	
Not sure, don't know	8	

C. In the last two or three years, has your (farm/ranch) requested assistance under this program?

Yes .... (SKIP TO F)	1	69/
No .... (ASK D)	2	
Don't know . (SKIP TO Q. 18)	8	

D. What is the main reason why your (farm/ranch) has not requested assistance in the last two or three years? Is it because your (farm/ranch) is not eligible for this program or because you do not need it, or is there some other reason?

Not eligible .. (SKIP TO Q. 18) ..	1	70/
No need .... (SKIP TO Q. 18) ..	2	
Other reason ..... (ASK E)	3	
Don't know .... (SKIP TO Q. 18) ..	8	

E. Please tell me what that reason is. RECORD VERBATIM.

71-72/

GO TO Q. 18

BEGIN DECK 14

17. (Continued)

F. In the past two or three years, did you request these services in *your own name* and your name only?

Yes .... (SKIP TO I) 1 09/
No .... (ASK G) 2

G. In the past two or three years, did you request these services jointly with someone else?

Yes .... (SKIP TO I) 1 10/
No .... (ASK H) 2

H. Who made the most recent request for these services?

Brother, son, other male .... (GO TO I) 1 11/
Wife, daughter, other female .. (GO TO I) 2
Don't know, not sure .... (GO TO I) 8

I. The last time (you/someone from your operation) requested assistance, did you receive the service you wanted?

Yes .... (GO TO J) 1 12/
No .... (SKIP TO K) 2
Still pending .... (SKIP TO K) 3
Don't know, don't remember ..... (SKIP TO K) 8

J. Did the technical assistance help you solve your conservation problem?

Yes 1 13/
No 2
Not sure,
don't know 8

17. (Continued)

K. All in all, do you think your case was treated fairly or unfairly?

Fairly ..... (SKIP TO Q. 18) 1 14/
Unfairly .... (ASK L) 2
Not sure,
don't know .... (ASK L) 8

L. IF UNFAIRLY: In what way do you think you (were/might have been) treated unfairly? RECORD VERBATIM.

15-16/

18. During the past two or three years, have you yourself had any business contacts with people from the Soil Conservation Office in your area?

Yes .... (ASK A) 1 17/
No .... (GO TO Q. 19) 2

A. IF YES: In general, were you satisfied or dissatisfied with the way you were treated by personnel from the Soil Conservation Office?

Satisfied .... (GO TO Q. 19) 1 18/
Dissatisfied .... (ASK B) 2
Don't know ... (GO TO Q. 19) 8

B. IF DISSATISFIED: In what way were you dissatisfied with the treatment you received? RECORD VERBATIM.

19-20/

19. Now a question about the Farmers Home Administration or FmHA. As you may know, FmHA administers many different loan programs for farmers and ranchers. Some examples are farm ownership or farm operating loans, rural housing loans, disaster loans, and small business loans.

IF NECESSARY:

FmHA provides both financing and technical assistance to help operators purchase or enlarge farms or ranches, to buy or improve their housing, to cover operating expenses, organize businesses, set up conservation practices, and to recover from natural disasters or other economic emergencies.

A. Have you ever heard about any of the FmHA loan programs for farmers and ranchers before now?

Yes .... (ASK B AND C)	1	21/
No .... (SKIP TO Q. 20)	2	
Not sure, don't know (SKIP TO Q. 20)	8	

B. How familiar are you personally with FmHA loan programs and their eligibility requirements? Are you very familiar with them, somewhat familiar, or not familiar with them at all?

Very familiar	1	22/
Somewhat familiar	2	
Not familiar at all	3	
Don't know	8	

C. In the last two or three years, has your (farm/ranch) applied for an FmHA loan?

Yes .... (SKIP TO F)	1	23/
No .... (ASK D)	2	
Don't know... (SKIP TO Q. 20)	8	

D. What is the main reason why your (farm/ranch) has not applied for any FmHA loans in the last two or three years? Is it because your (farm/ranch) is not eligible for these loans, because you did not need them, or is there some other reason?

Not eligible .. (SKIP TO Q. 20) ..	1	24/
Not needed .... (SKIP TO Q. 20) ..	2	
Other reason ..... (ASK E)	3	
Don't know .... (SKIP TO Q. 20) ..	8	

E. Please tell me what that reason is. RECORD VERBATIM.

25-26/

GO TO Q. 20

19. (Continued)

F. In the past two or three years, did you apply for an FmHA loan in your own name and your name only?

Yes	(SKIP TO I)	1	27/
No	(ASK G)	2	

G. In the past two or three years, have you signed your name as a co-applicant for a loan along with someone else?

Yes	(SKIP TO I)	1	28/
No	(ASK H)	2	

H. Who made the most recent application for an FmHA loan?

Brother, son, other male	(GO TO I)	1	29/
Wife, daughter, other female	(GO TO I)	2	
Don't know, not sure	(GO TO I)	8	

I. The last time (you/someone from your operation) applied in this way, were you found to be eligible for the loan or not?

Yes, eligible	(ASK J)	1	30/
No, not eligible	(SKIP TO K)	2	
Still pending	(SKIP TO K)	3	
Don't know	(SKIP TO K)	8	

J. IF ELIGIBLE: And did you finally receive the loan?

Yes	1	31/
No	2	
Still pending	3	
Don't know	8	

K. Which of the following types of loans was this? READ CATEGORIES.

A farm ownership loan	1	32/
A farm operating loan	2	
A disaster loan	3	
An economic emergency loan	4	
A housing loan	5	
Or some other type of FmHA loan	6	
(IF VOLUNTEERED) Don't know	8	

19. (Continued)

L. All in all, do you think your case was treated fairly or unfairly?

Fairly ..... (SKIP TO Q. 20) ..... 1 — 33/
Unfairly .... (ASK M) 2
Not sure,
don't know .... (ASK M) 8

M. IF UNFAIRLY: In what way do you think you (were/might have been) treated unfairly? RECORD VERBATIM.

34-35/

---

20. During the last two or three years, have you yourself had any business contact with people from FmHA?

Yes .... (ASK A) .... 1 — 36/
No .... (GO TO Q. 21) 2

A. IF YES: In general, were you satisfied or dissatisfied with the way you were treated by FmHA personnel?

Satisfied .... (GO TO Q. 21) ..... 1 — 37/
Dissatisfied .... (ASK B) 2
Don't know ... (GO TO Q. 21) 8

B. IF DISSATISFIED: In what way were you dissatisfied with the treatment you received? RECORD VERBATIM.

38-39/

21. We'd also like to know about any experiences you may have had with programs or activities run by the Extension Service in your area. In the last two or three years have you personally been involved with any of the following Extension Service activities:

	Yes	No	
A. Classes or other activities on agricultural production?	1	2	40/
B. Classes or other activities on farm or ranch management?	1	2	41/
			42/R
C. Classes or other activities on inheritance laws or estate planning?	1	2	43/
			44/R
D. 4-H or other youth activities?	1	2	45/
E. Discussing specific problems of your operation with an extension agent or staff member?	1	2	46/
F. Getting information about other USDA programs or services?	1	2	47/

22. Have you ever tried to participate in any of these activities and felt that you were discouraged from doing so by Extension personnel?

Yes	1	48/
No	2	

23. In the past two or three years, have you yourself had any business contact with Extension personnel?

Yes .... (ASK A)	1	49/
No .... (SKIP TO Q. 24)	2	
Don't recall . (SKIP TO Q. 24)	8	

A. IF YES: In general, were you satisfied or dissatisfied with the way you were treated by Extension Service personnel?

Satisfied ... (GO TO Q. 24)	1	50/
Dissatisfied ... (ASK B)	2	
Don't know ... (GO TO Q. 24)	8	

B. IF DISSATISFIED: In what way were you dissatisfied with the treatment you received? RECORD VERBATIM.

51-52/

24. Have you ever been involved in any committees or groups that helped to develop or carry out Extension programs in your area? (PROBE: Some examples are education programs, 4-H activities, home economics programs, and so forth.)

Yes	1	53/
No	2	
Don't know, don't recall	8	

---

25. Have you ever served as a member of any official committee, advisory board, panel, or other group connected with the U.S. Department of Agriculture?

Yes	1	54/
No	2	

---

26. Have you ever served on any committee, advisory board, panel or other group concerned with agricultural matters in your state, county, or local government?

Yes	1	55/
No	2	

---

27. In the future, if you were asked to serve on, or run for election to an official committee or group of this kind, do you think you would definitely agree to do it, that you would probably agree, probably not agree, or definitely not agree to do it?

Definitely agree	1	56/
Probably agree	2	
Probably not agree	3	
Definitely not agree	4	
Don't know	8	

28. Next, we would like to know about your membership in farm organizations. For each of the following organizations, please tell me whether you personally have been a member at any time during the last two or three years.

First, how about marketing cooperatives?

	Yes	No	Don't Know	
A. Marketing cooperative?	1	2	8	57/
B. Farm supply cooperative?	1	2	8	58/
C. Any general farm organization, such as the Grange, Farm Bureau, National Farmers Union, or American Agricultural Movement?	1	2	8	59/
				60/R
D. Any commodity producers' associations, such as the American Dairy Association, or National Wheat Producers Association?	1	2	8	61/
				62-63/R
E. Any community organizations, such as a church group, PTA, civic organization, and so forth?	1	2	8	64/

PART IV

65/R

29. Please tell me, in what year were you born? 1___ (YEAR) 66-68/

30. Which one of these categories do you consider yourself. READ CATEGORIES.

American Indian or Alaskan Native ..	1	69/
Asian or Pacific Islander	2	
Black .... (ASK A)	3	
White ....(ASK A)	4	

A. Do you consider yourself to be of Hispanic origin?

IF NECESSARY:
By Hispanic origin, we mean having ancestors of Mexican, Puerto Rican, Central or South American or other Spanish origins.

Yes	1	70/
No	2	

BEGIN DECK 15

31. What is the highest grade you finished in school? 08-72/R

1 - 8th grade	01	73-74/
9 - 11th grade	02	
12th grade or high school equivalent	03	
Vocational school beyond high school	04	
Some college	05	
Bachelor's degree	06	
M.A., M.S., other Master's degree	07	
Ph.D., M.D., other professional degree	08	

BEGIN DECK 16

32. Have you ever held a job for pay outside the home and farm?

Yes	1	09/
No .... (SKIP TO Q. 34)	2	

---

33. Do you currently have a job for pay outside home or farm work?

Yes .... (SKIP TO Q. 35)	1	10/
No .... (ASK A)	2	

A. IF NO: In what year did you leave your last job? ☐☐ (YEAR) 11-12/

---

34. Are you looking for work now or do you intend to start looking for work outside your (farm/ranch) operation during the next 12 months?

Yes	1	13/
No	2	
Don't know	8	

IF Q. 32 IS "NO" OR IF Q. 33A IS 1977 OR BEFORE, SKIP TO Q. 36.

35. CHOOSE
IF CURRENTLY EMPLOYED: We'd like to know a bit about this job. (IF MORE THAN ONE: The job at which you spend the most hours.)

IF EMPLOYED '78-'80: We'd like to know a bit about the last job you had.

A. What kind of work (do/did) you normally do on that job?
PROBE: What is the job called? What (are/were) the main duties?

OFFICE USE ONLY

☐☐☐ 14-16/

☐☐ 17-18/

B. What kind of place (do/did) you work for? PROBE: What do they make or do?

OFFICE USE ONLY

☐☐☐ 19-21/

C. How many hours a week (do/did) you usually spend on the job?

HOURS: ☐☐ 22-23/

24-25/R

D. Altogether, how much money did you earn before taxes in 1979 from (off-farm/off-ranch) jobs? PROBE FOR BEST ESTIMATE: ROUND TO NEAREST THOUSAND DOLLARS.

$ ☐☐☐, 0 0 0 26-28/

29-40/R

36. And how much net farm income did (you/you and your wife) earn in 1979 before taxes, but after production expenses are subtracted? PROBE FOR BEST ESTIMATE; ROUND TO NEAREST THOUSAND DOLLARS.

$ ☐☐☐, 0 0 0 41-43/

37. A. In rough figures, what is the total value of your (farm/ranch) operation today? Please include the value of all land, animals, machinery and other assets.
(PROBE FOR BEST ESTIMATE. ROUND TO NEAREST THOUSAND DOLLARS.)

$ ☐ , ☐☐☐ , 0 0 0 44-47/

IF "DON'T KNOW," CODE 9898.
IF REFUSED, CODE 9797.

B. And what is the total debt for your operation today, including all mortgages for farm or ranch property, and other loans for machinery, animals or other things? (PROBE FOR BEST ESTIMATE. ROUND TO NEAREST THOUSAND DOLLARS.)

$ ☐ , ☐☐☐ , 0 0 0 48-51/

IF "DON'T KNOW," CODE 9898.
IF REFUSED, CODE 9797.

---

38. And now just one final question:

What do you think is the most important thing the U.S. Department of Agriculture could do to help farm and ranch people? RECORD VERBATIM. PROBE FOR MOST IMPORTANT.

52-53/

54-56/R

TIME ENDED: ____________ AM PM

DECK 16

SUMMARY FROM RECORD OF CALLS

CODE RESPONDENT'S SEX:

Male 1 57/

Female 2

DID RESPONDENT EVER TEMPORARILY REFUSE OR BREAKOFF INTERVIEW?

Yes 1 58/

No 2

ENTER TOTAL NUMBER OF PHONE CALLS REQUIRED TO COMPLETE INTERVIEW:

☐☐ 59-60/

CODE DAY OF WEEK THAT INTERVIEW WAS COMPLETED:

Monday 1 61/
Tuesday 2
Wednesday 3
Thursday 4
Friday 5
Saturday 6
Sunday 7

ENTER TIME OF DAY INTERVIEW WAS COMPLETED (USE 24 HOUR TIME NOTATION, THAT IS, 5:30 PM = 1730; ENTER TIME INTERVIEW WAS STARTED):

☐☐☐☐ 62-65/

ENTER LENGTH OF INTERVIEW IN MINUTES:

☐☐☐ 66-68/

WAS THERE EVER ANY DIFFICULTY IN IDENTIFYING THE PROPER RESPONDENT FOR THIS HOUSEHOLD?

Yes 1 69/

No 2

CODE SEX OF INTERVIEWER WHO COMPLETED INTERVIEW:

Male 1 70/

Female 2

CHECK BOX IF RESPONDENT BELONGS TO A "TWO-INTERVIEW HOUSEHOLD"
BUT ONLY ONE INTERVIEW WAS COMPLETED .... ☐ 71/

APPENDIX D

REGIONAL DEFINITIONS

In the initial stages of study design for the Farm Women's Survey, USDA researchers specified that the sample should include roughly equal numbers of interviews in each of the four broad agricultural regions (Northeast, North Central, South and West). Economy dictated the use of an area sampling frame which had been used for an economic survey of farm operators conducted by USDA. However, using the conventional regional grouping of states, the sampling frame would not have provided equal numbers of operators in the four regions: the Northeast as normally defined would have proportionally fewer cases in the sample, and the Midwest would have had proportionally more cases. One possible solution, selection of additional segments within the conventional Northeast region, was ruled out due to cost and time constraints. Instead, USDA statisticians developed a compromise design which incorporated subsampling of sample replicates in most states outside the Northeast region. In addition, the states of Michigan, Indiana and Ohio were switched from the Midwest to the Northeast region in order to ensure a sample of sufficient size for the latter region (other regions were defined as in the USDA Census of Agriculture). The accompanying table shows the states included within each region as defined for this study.

TABLE D.1

REGIONAL DEFINITIONS

Region	State
Northeast	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Ohio, Michigan, Indiana
Midwest	North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois
South	Florida, Mississippi, Alabama, Georgia, South Carolina, North Carolina, Tennessee, Arkansas, Louisiana, Oklahoma, Texas, Kentucky, Virginia, West Virginia, Maryland, Delaware
West	Washington, Oregon, California, Nevada, Idaho, Montana, Wyoming, Colorado, Utah, Arizona, New Mexico

Appendix E

Construction of Relative Program Involvement Scale

The relative program involvement scale analyzed in Chapter 4 was computed as a weighted sum of respondents' scores of relevant program and agency items from Part III of the questionnaires (see Appendix C). The items used and their weights are listed below. Before computing the index score, all items were recoded as dummy variables in the manner indicated in the right most column.

Weight	Question number (W=Women's version: M=Men's version)	Brief description	Recode
1	W-19 M-14	Is operation on file at local ASCS office?	Yes=1 Else=0
2	W-19A M-14A	Is R's own name in ASCS file?	Yes=1 Else=0
1	W-19B M-14B	Has R ever tried to have own name listed in ASCS file?	Yes=1 Else=0
1	W-20A M-15A W-22A M-17A W-24A M-19A	Has R ever heard about Price Support, Conservation Operations, FmHA Loan programs?	Yes=1 Else=0
2	W-20B M-15B W-22B M-17B W-24B M-19B	How Familiar is R with each of the three programs?	Very or somewhat=1 Else=0
1	W-20C M-15C W-22C M-17C W-24C M-19C	Has R's operation filed an application for a program?	Yes=1 Else=0
5	W-20F M-15F W-22F M-17F W-24F M-19F	Has R filed application in his/her own name only? (see note below)	Yes=1 Else=0
3	W-20G M-15G W-22G M-17G W-24G M-19G	Has R filed application jointly with someone else?	Yes=1 Else=0
1	W-24I M-19I	Was operation found to be eligible for FmHA loan?	Yes=1 Else=0
2	W-20I M-15I W-22I M-17I W-24J M-19J	Did R's operation finally receive loan or other benefits sought?	Yes=1 Else=0

Appendix E (continued)

Weight	Question number (W=Women's version: M=Men's version)	Brief description	Recode
3	W-21 M-16 W-23 M-18 W-25 M-20 W-28 M-23	Has R had business contacts with ASCS, SCS, FmHA or Extension personnel?	Yes=1 Else=0
2	W-26 M-21 A, B, A, B, D, F, C, D, G, H. E, F.	Has R participated in listed Extension activities?	Yes=1 Else=0
3	W-29 M-24	Has R served on Extension committee to develop or carry out programs?	Yes=1 Else=0
4	W-30 M-25 W-31 M-26	Has R served on federal or state level committees, panels advisory boards of other official groups?	Yes=1 Else=0
2	W-32 M-27	Would R be willing to serve on an official group in the future?	Definitely or probably =1 Else=0

Note: Points contributed to index scores by respondents' business contacts with ASCS, SCS or FmHA personnel were doubled if respondents also reported being sole or joint applicants to programs at the same agency. For example, those who reported contacts with ASCS staff, but who were not named on Price Support Program applications, received three points for the business contact. If respondents also indicated that they were named on the applications, six points were added to the index score.

APPENDIX F

CONSTRUCTION OF INDEPENDENT VARIABLES FOR PROGRAM/AGENCY INVOLVEMENT REGRESSION ANALYSIS--CHAPTER 4

We summarize below the routines for constructing variables listed in Table 4.20, pp. 177-179. Except where noted, variables included in both men's and women's specifications were computed identically. For wording of questions referenced, see Appendix . Question numbers refer to women's questionnaire except where noted.

Variable	Construction
Husband's involvement in program application	For married women (96%) Code=1 (husband involved) if Q.20G or Q.20H or Q.22G or Q.22H or Q.24G or Q.24H was coded as 1; Otherwide code=0. For unmarried women (4%), code=0.
Education level	See Q.42.
Elected or appointed to public office	Code=1 if Q.34 equals 1; otherwise code=0.
Member of community (nonfarm) organizations	Code=1 if Q.33H equals 1; otherwise code=0.
Financial independence	Count of positive responses (code=1) to Q.49A, C, and E. Range=0 to 3.
Membership in farm organizations	Count of positive responses to Q.33A, B, C, and E. Range=0 to 4.
Proportion of farm tasks R does (for men, proportion of tasks R's wife does)	Computed as a ratio. Numerator (tasks done by woman): Counts instances of code 1 or 2 to Q.13A, B, C, D, E, F, G, H, I, K, and L. Denominator (tasks done on operation): Counts instances of codes 1 through 3 to same items. Note: Variable for men computed using men's Q.9, same parts.
Proportion of farm decisions R helped make	Computed as a ratio. Numerator (decisions R involved in): Counts instances of code 1 or 3 to Q.14A, B, D, E, F, and H. Denominator (decisions made on operation): Counts instances of codes 1 through 3 to same items.

Variable	Construction
R's name on deed to owned land	Code=1 if Q.6 equals 1; otherwise code=0.
R's name on rental contract	Code=1 if Q.8 equals 1; otherwise code=0.
R's name on checks for products sold	Code=1 if Q.48 equals 1; otherwise code=0.
Proportion of R's life spent on farm	Computed as a ratio. Numerator (years on farm): Code equal to response to Q.3A (if N/A, code=0). Denominator (R's age): Code equal to 1980 less response to Q.35.
Does R consider self to be one of main operators	Code=1 if Q.2A equals 1; otherwise code=0.
Could R run operation alone if something happened to spouse	If R is married (96%) Code=1 if Q.17 equals 1 or 2; otherwise code=0. If R is not married (4%) Code=1.
Number of farm financial questions R was not able to answer	Counts instances of "don't know" responses to Q.51, Q.52A, and Q.52B. Range=0 to 3.
Number of farm program areas R did not know enough about to judge own satisfaction	Counts instances of "don't know" responses to Q.18D andQ.18E. Range=0 to 2.
Total farm/ranch acreage	Code=response to Q.4. Note: A small number of extreme values with excessive influence on estimated means and variances were declared missing data on this item. Excluded were: a) 20 weighted female cases (.8 of 1%) reporting 16,000 or more total acres. b) 10 weighted male cases (1.8%) reporting 13,000 or more total acres. Excluded cases were nearly 11 standard deviations above the revised means.

Variable	Construction
Total cropland acreage	Code=response to Q.9. Note: As for total acreage, a few cases (female only) with extreme values were declared outliers and deleted. Excluded were 4 weighted cases reporting 12,000 or more cropland acres. Excluded cases were more than 26 standard deviations above the revised mean.
Operation produces soybeans	Code=1 if soybeans listed among 5 crops in Q.10; otherwise code=0.
Operation produces winter wheat	Code=1 if winter wheat listed among 5 crops in Q.10; otherwise code=0.
Number of beef cattle on hand	Coded as responses to Q.12A.
Number of dairy cattle on hand	
Number of hogs/pigs on hand	
Percent of gross sales from crops	Coded as response to Q.11.
Operation produces both crops and livestock for sale	Code=1 if response to Q.11 was at least 11 percent and no greater than 89 percent; otherwise code=0.
Number of family members beside spouse who regularly do farm work	Count of "yes" responses to Q.38 for all household members except spouse.
Someone besides R and spouse regularly helps to make final decisions for the operation	Code=1 if "yes" response to Q.15; otherwise code=0.
Net farm income	Coded as response to Q.51. Note: In response to the net farm income question, 155 women and 41 men indicated that their operations had sustained net losses in 1979. However, only 11 males and 28 females were willing or able to specify the amount of their losses, and did so only after interviewers probed for their "best guess." To minimize loss of information and standardize the treatment of these cases, all respondents who indicated a net loss were classified at the zero point on the income measure. Also, to further avoid excessive missing data, R's who did not know their net farm

Variable	Construction
	income (but who did not indicate a loss) were assigned the median income value of $5,000. The effect of both of these procedures is to inflate the estimate of mean net farm income and decrease estimated variance compared estimates from other sources.
Total farm value	Coded as response to Q.52A. Note: R's who did not know the total value of their operations were recoded to the median value of $150,000.

Note: The effect of missing value substitutions for the net income, total value and debt variables on their zero-order correlations with the dependent variable is shown below.

	No Substitution				Substitution			
	Mean (Thousands)	Std. Dev. (Thousands)	Correlation	N	Mean (Thousands)	Std. Dev. (Thousands)	Correlation	N
Women								
Net farm income	$ 12	$ 26	.13	1,691	$ 11	$ 23	.13	2,315
Total farm value	$308	$486	.13	1,549	$253	$486	.14	2,381
Total farm debt	$ 51	$130	.27	1,932	$ 44	$118	.26	2,385
Men								
Net farm income	$ 14	$ 40	.06	474	$ 14	$ 38	.06	521
Total farm value	$356	$553	.26	498	$336	$530	.27	549
Total farm debt	$ 72	$160	.37	527	$ 70	$157	.35	551

REFERENCES

Bokemeier, Janet, Verna Keith, and Carolyn Sachs
1980 "Whatever happened to rural women? A comparative study of labor force participation." Paper presented at the Rural Sociological Society annual meeting, August, Ithaca, NY.

Boulding, Elise
1979 "Women in family farming." Paper presented at the annual meetings of the American Sociological Association, Boston, August 27-31.

Brown, David L. and Jeanne M. O'Leary
1979 Labor Force Activity of Women in Metropolitan and Nonmetropolitan America. USDA, Economics, Statistics, and Cooperatives Service, Rural Development Research Report No. 15. Washington, D.C.

Capener, Harold and Alan Berkowitz
1976 "The farm family: A unique organization." New York's Food and Life Sciences 9 (July-September):8-11.

Coughenour, C. Milton and Anne Gabbard
1977 "Part-time farmers in Kentucky in the early 1970's: The development of dual careers." RS-54. University of Kentucky: Department of Sociology, College of Agriculture, Agriculture Experiment Station.

Elbert, Sarah, Joyce Finch, and Gould Colman
1976 "The Neirikers: Family no. 3." How Farm Families Make Decisions. Rural Soc. Bulletin 79, Agricultural Economics Research 76-11. Ithaca, NY: Cornell University.

Hagood, Margaret Jarman
1977 Mothers of the South.
(1939) N.Y.: W.W. Norton and Company.

Hepner, Julie
1979 "The role of the midwestern farm wife." Unpublished manuscript, Department of Family and Consumer Economics, University of Illinois, Urbana.

Jones, Calvin, Paul Sheatsley, and Arthur Stinchcombe
1979 Dakota Farmers and Ranchers Evaluate Crop and Livestock Surveys. Report 128. Chicago: National Opinion Research Center.

Jones, Calvin
1980 Agricultural Information: Uses, Needs, and USDA Services. Chicago: National Opinion Research Center.

Joyce, Lynda and Samuel Leadley
1977 An Assessment of Research Needs of Women in the Rural United States: Literature Review and Annotated Bibliography. A.E.&R.S. 127. University Park, PA: Department of Agricultural Economics and Rural Sociology, Agricultural Experiment Station, Pennsylvania State University.

Kau, Susan
1976 Women's Involvement in Wisconsin Cooperatives. Unpublished M.S. thesis, Department of Agricultural Journalism, University of Wisconsin, Madison.

Kohl, Seena
1976 Working Together: Women and Family in Southwestern Saskatchewan. Montreal: Holt, Rinehart, and Winston.

Lodwick, Dora and Polly Fassinger
1979 "Variations in agricultural production activities of women on family farms." Paper presented at the annual meeting of the Rural Sociological Society, Burlington, VT, August 23-26.

Orr, Richard
1979 "Farm wives taking to the field with men." Chicago Tribune, October 28, 1979, p. 10, section 1.

Pearson, Jessica
1979 "Note on female farmers." Rural Sociology 44 (Spring):189-200.

Salamon, Sonya and Ann Mackey Keim
1979 "Land ownership and women's power in a midwestern farming community." Journal of Marriage and the Family 41 (February):109-111.

Sawer, Barbara J.
1973 "Predictors of the farm wife's involvement in general management and adoption decisions." Rural Sociology 38 (Winter):421-426.

Sweet James A.
1972 "The employment of rural farm wives." Rural Sociology 37 (December):553-577.

Taylor, Norma
1976 "'All this for three and a half a day': The farm wife." Pp. 151-164 in Gwen Matheson (ed.), Women in the Canadian Mosaic. Toronto: Peter Martin Associates.

U.S. Department of Agriculture, Economics, Statistics, and Cooperatives Service
1979 Status of the Family Farm. Second Annual Report to Congress. Agricultural Economic Report 434. Washington, D.C.: U.S. Government Printing Office.

U.S. Department of Agriculture, Economics, Statistics, and Cooperatives Service
1980 Another Revolution in U.S. Farming? A Summary Analysis of the Structure of U.S. Farming. Agricultural Information Bulletin No. 433. Washington, D.C.: U.S. Government Printing Office.

U.S. Bureau of the Census
1979 "Farm population of the United States: 1978." Current Population Reports, Series P-27, No. 52. Washington, D.C.: U.S. Government Printing Office.

U.S. Department of Labor, Bureau of Labor Statistics
1977 U.S. Working Women: A Databook. Bulletin 1977. Washington, D.C.: U.S. Government Printing Office.

U.S. Department of Labor
1980 Perspectives on Working Women: A Databook. Bulletin 2080. Washington, D.C.: U.S. Government Printing Office.

Wilkening, Eugene
1980 Family-Farm Relationships on Wisconsin Farms. Madison, WI: Department of Rural Sociology, University of Wisconsin.

Wilkening, Eugene and Nancy Ahrens
1979 "Involvement of wives in farm tasks as related to characteristics of the farm, the family, and work off the farm." Paper presented at annual meeting of the Rural Sociological Society, Burlington, VT, August.

Wilkening, Eugene and Lakshmi Bharadwaj
1968 "Aspirations and task involvement as related to decision-making among farm husbands and wives." Rural Sociology 33 (March):30-45.

Wilkening, Eugene and Denton Morrison
1963 "A comparison of husband and wife responses concerning who makes farm and home decisions." Marriage and Family Living 25 (August):349-351.